

Archives AB2

# HARVARD MEDICAL SCHOOL

SCHOOL OF DENTAL MEDICINE

25 SHATTUCK STREET
BOSTON · MASSACHUSETTS

WITH AN ANNOUNCEMENT FOR 1959-1960



1958—1959

PUBLISHED BY HARVARD UNIVERSITY CAMBRIDGE, MASSACHUSETTS



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# HARVARD MEDICAL SCHOOL CALENDAR

Academic Calendar for 1958–1959

	TICADEN	IIC CALENDAR FOR 1930-1939
Monday	June 9	Summer courses begin for fourth year class.
Friday	July 4	Independence Day: a holiday.
Monday	September 1	Labor Day: a holiday.
Friday	September 12	Registration day for first and second year
·		classes.
Monday	September 15	ACADEMIC YEAR begins for first and second year classes.
Friday	September 19	Registration day for third year class.
Monday	September 22	ACADEMIC YEAR begins for third year
•	•	class.
Tuesday	September 30	Registration day for fourth year class.
	y October i	ACADEMIC YEAR begins for fourth year
		class.
Monday	October 13	Observance of Columbus Day: a holiday.
Tuesday	November 11	Veterans' Day: a holiday.
Thursday	November 27	Thanksgiving Day: a holiday.
Monday	December 8	SECOND TRIMESTER begins for third
		year class.
December	21, 1958-	RECESS for first, second and third year
	y 4, 1959	classes.
January 19		Examination period for first year class.
	January 26	SECOND HALF YEAR begins for first
	,	and second year classes.
Monday	February 23	Observance of Washington's Birthday: a
		holiday.
Monday	March 9	THIRD TRIMESTER begins for third
·		year class.
Wednesda	y April 1	Last day for filing application for the de-
	, <u>*</u>	gree of M.D. in June 1959.
		Last day for filing application for scholar-
		arship for 1959–1960.
April 12-1	9	RECESS for first, second and third year
		classes.
Friday	May 29	Alumni Day.
Saturday	May 30	Memorial Day: a holiday, also Class Day
		for Class of 1959.

Examination period for first, second and *June 1–6* third year classes.

Commencement. Thursday June 11

#### ACADEMIC CALENDAR FOR 1959–60

Summer courses begin for fourth year class. Monday June 8

Independence Day: a holiday. Saturday July 4

Monday September 7 Labor Day: a holiday.

September 18 Registration day for first and second year Friday

September 21 ACADEMIC YEAR begins for first and Monday second year classes.

September 25 Registration day for third year class. Friday

September 28 ACADEMIC YEAR begins for third year Monday class.

September 29 Registration day for fourth year class. Tuesday

Wednesday September 30 ACADEMIC YEAR begins for fourth year class.

Columbus Day: a holiday. Monday October 12 Wednesday November 11 Veterans' Day: a holiday. Thursday November 26 Thanksgiving Day: a holiday.

SECOND TRIMESTER begins for third December 14 Monday

year class.

RÉCESS for first, second and third year December 20, 1959-January 3, 1960 classes. Examination period for first year class.

January 25-30

Monday February 1 SECOND HALF YEAR begins for first

and second year classes.

Washington's Birthday: a holiday. Monday February 22

THIRD TRIMESTER begins for third Monday March 14 year class.

Last day for filing application for the de-Friday April 1

gree of M.D. in June 1960.

Last day for filing application for scholar-

arship for 1960-1961.

RECESS for first, second and third year April 10-17 classes.

Friday May 27 Alumni Day.

Class Day for Class of 1960. Saturday May 28 Monday Memorial Day: a holiday. May 30

Examination period for first, second and June 6-11

third year classes.

Thursday June 16 Commencement.

## THE PRESIDENT AND FELLOWS OF HARVARD COLLEGE

This Board is commonly known as the Corporation

PRESIDENT

NATHAN MARSH PUSEY, Ph.D., LL.D., L.H.D.

**Fellows** 

CHARLES ALLERTON COOLIDGE, A.B., LL.B. WILLIAM LUKE MARBURY, A.B., LL.B. RICHMOND KEITH KANE, A.B., LL.B. THOMAS STILWELL LAMONT, A.B. FRANCIS HARDON BURR, A.B., LL.B.

TREASURER

PAUL CODMAN CABOT, A.B., M.B.A.

SECRETARY TO THE CORPORATION DAVID WASHBURN BAILEY, A.B.

#### THE BOARD OF OVERSEERS

The President and the Treasurer of the University, ex officio, and the following persons by election:—

#### 1959

DEXTER PERKINS, A.B., PH.D., M.A. (hon.), LL.D., LITT.D. THOMAS DUDLEY CABOT, A.B., L.H.D., LL.D. ROY EDWARD LARSEN, A.B., L.H.D., LL.D. JOSEPH SILL CLARK, JR., S.B., LL.B., LL.D. JOHN WHITE HALLOWELL, A.B., M.B.A.

#### 1960

George Gund, A.B., L.H.D., LL.D.
John Phillips Marquand, A.B., Litt.D., L.H.D.
Henry Bromfield Cabot, A.B., LL.B.
Meyer Kestnbaum, S.B., M.B.A.
David Rockefeller, S.B., Ph.D., LL.D.

#### 1961

CLARENCE COOK LITTLE, A.B., S.M.Zool., S.D., LL.D., LITT.D., S.D. (hon.), L.H.D., Ed.D. (hon.)

MALCOLM ENDICOTT PEABODY, A.B., B.D., D.D., S.T.D.

ARTHUR AMORY HOUGHTON, JR., L.H.D., LL.D., LITT.D., S.D. (hon.)

HENRY BRADFORD WASHBURN, JR., A.B., PH.D. (hon.), S.D. (hon.) COURTNEY CRAIG SMITH, PH.D.

#### 1962

EDWARD STREETER, A.B.
FREDERIC BENNETT WHITMAN, A.B., M.B.A.
FREDERICK AUGUST OTTO SCHWARZ, A.B., LL.B.
STANLEY MARCUS, A.B.
THOMAS HARRISON HUNTER, A.B., B.A., M.D.

(The term expires, in each case, on Commencement Day of the year indicated.)

#### 1963

RAYMOND SANGER WILKINS, A.B., LL.B., S.J.D., LL.D.

DEVEREUX COLT JOSEPHS, A.B., LL.D.

DWIGHT PARKER ROBINSON, JR., A.B., M.B.A.

LAWRENCE EDWARD MALLINCKRODT, A.B., M.B.A.

JOHN FITZGERALD KENNEDY, A.B., LL.D., D.A.O., S.D. (hon.),

D.P.A. (hon.), Litt.D.

#### 1964

Francis Boyer, LL.D.

James Morison Faulkner, A.B., M.D.

Alexander Moss White, A.B., LL.D.

William Gurdon Saltonstall, A.M., L.H.D., LL.D., Litt.D.

Edwin Allan Locke, Jr., A.B.

Secretary of the Board of Overseers
David Washburn Bailey, A.B. 25 Massachusetts Hall, Cambridge

Assistant Secretary of the Board of Overseers
James Robbins Reynolds, A.B. 28 Massachusetts Hall, Cambridge

## COMMITTEE TO VISIT THE MEDICAL SCHOOL AND THE SCHOOL OF DENTAL MEDICINE

THOMAS H. HUNTER, Chairman ROBERT CUTLER, Vice-Chairman

CHARLES B. BARNES
ABRAM BERKOWITZ
GERALD W. BLAKELEY, JR.
FRANCIS BOYER
PAUL F. CLARK
HUDSON HOAGLAND
HARVEY P. HOOD
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RAYMOND J. NAGLE
RUSSEL H. PATTERSON
H. IRVING PRATT

John R. Quarles
William J. Speers, Jr.
John D. Stewart
Maurice L. Tainter
Harold S. Vanderbilt
Joseph F. Volker
Joseph T. Walker, Jr.
George Whitney
Robert Winthrop
William W. Wolbach
Charles H. Wood

WILLIAM E. WOOD

# ADMINISTRATIVE OFFICERS OF THE MEDICAL SCHOOL AND SCHOOL OF DENTAL MEDICINE

President: NATHAN MARSH PUSEY, Ph.D., LL.D., L.H.D. Office: 1 Massachusetts Hall, Cambridge.

Dean of the Medical School and of the Faculty of Medicine: George Packer Berry, M.D., LL.D., S.D. (hon.), LITT.D., L.H.D.

Dean of the School of Dental Medicine: Roy Orval Greep, S.M., Ph.D.

Associate Dean of the School of Dental Medicine: Reidar Fauske Sognnaes, Ph.D., D.M.D.

Associate Dean for Financial Affairs of the Faculty of Medicine: Henry Coe Meadow, S.B.

Assistant Dean for Student Affairs of the Faculty of Medicine: Joseph Warren Gardella, M.D.

Assistant Dean for Admissions of the Faculty of Medicine: Kendall Emerson, Jr., M.D.

Assistant Dean for Courses for Graduates of the Faculty of Medicine: Eugene Charles Eppinger, M.D.

Chairman of the Division of Medical Sciences of the Faculty of Arts and Sciences: Eric Glendinning Ball, Ph.D., S.D. (hon.).

Director of the Health and Medical Care Program for Students: Donald Asa Tucker, M.D.

Office hours, daily, except Saturday afternoons, Sundays, and holidays, 8:30-9:45 a.m. and 1:00-2:00 p.m., Peter Bent Brigham Hospital. Telephone: BEacon 2-8000.

Director of Medical Information in the University News Office for the Medical Area: Herbert Arthur Shaw, A.B.

Registrar: Audrey Noreen Koller, A.B.

Librarian: RALPH THEODORE ESTERQUEST, S.B., A.M.

Assistant Librarian for Resources and Acquisitions: Harold John Bloomquist, A.B., S.M.

Director of Alumni Relations: Thomas Hinckley Lanman, M.D. Executive Secretary of the Harvard Medical Alumni Association: Dorothy Murphy.

The Offices of Administration of the Medical School are located in the Administration Building at 25 Shattuck Street; those of the School of Dental Medicine, at 188 Longwood Avenue.

The Bursar's Office is in Lehman Hall, Cambridge. It is open on all business days from 9:00 a.m. to 5:00 p.m., except Saturdays, for the receipt of fees, payments, and other financial business.

# ADMINISTRATIVE BOARD OF THE FACULTY OF MEDICINE

- NATHAN M. PUSEY, Ph.D., LL.D., L.H.D., President of the University (ex officio).
- GEORGE P. BERRY, M.D., LL.D., S.D. (hon.), LITT.D., L.H.D., Dean of the Faculty of Medicine and Professor of Bacteriology (ex officio).
- ROY O. GREEP, S.M., Ph.D., Dean of the School of Dental Medicine and Professor of Anatomy in the School of Dental Medicine (ex officio).
- REIDAR F. SOGNNAES, Ph.D., D.M.D., Associate Dean of the School of Dental Medicine and Charles A. Brackett Professor of Oral Pathology (ex officio).
- Henry C. Meadow, S.B. Associate Dean for Financial Affairs of the Faculty of Medicine and Executive Secretary to the Committee on Research and Development (ex officio).
- Joseph W. Gardella, M.D., Assistant Dean for Student Affairs of the Faculty of Medicine and Clinical Associate in Medicine (ex officio).
- KENDALL EMERSON, JR., M.D. Assistant Dean for Admissions of the Faculty of Medicine and Assistant Clinical Professor of Medicine (ex officio).
- EUGENE C. ÉPPINGER, M.D., Assistant Dean for Courses for Graduates of the Faculty of Medicine and Assistant Clinical Professor of Medicine (ex officio).
- Donald A. Tucker, M.D., Director of the Health and Medical Care Program for Students and Instructor in Medicine (ex officio).
- A. CLIFFORD BARGER, M.D., Associate Professor of Physiology.
- DAVID G. COGAN, M.D., Director of the Howe Laboratory of Ophthalmology and Professor of Ophthalmology.
- Louis K. Diamond, M.D., Associate Professor of Pediatrics at The Children's Hospital.
- J. Englebert Dunphy, M.D., Professor of Surgery.
- Monroe D. Eaton, M.D., Associate Professor of Bacteriology and Immunology.

- A. Stone Freedberg, M.D., Associate Professor of Medicine at the Beth Israel Hospital.
- DAVID G. FREIMAN, M.D., Clinical Professor of Pathology.
- OTTO KRAYER, M.D., A.M. (hon.), Charles Wilder Professor of Pharmacology.
- ERICH LINDEMANN, Ph.D., M.D., Professor of Psychiatry.
- Duncan E. Reid, M.D., William Lambert Richardson Professor of Obstetrics.
- JAMES H. SHAW, Ph.D., Associate Professor of Biological Chemistry in the School of Dental Medicine.
- CLAUDE A. VILLEE, JR., Ph.D., Associate Professor of Biological Chemistry at the Boston Lying-in Hospital.
- PAUL C. ZAMECNIK, M.D., Director of the J. Collins Warren Laboratories of the Huntington Memorial Hospital and Collis P. Huntington Professor of Oncologic Medicine.

# HARVARD MEDICAL SCHOOL BOSTON

#### HISTORY AND ORGANIZATION

The Harvard Medical School was the third to be established in the United States and is the second oldest in point of consecutive years of service to medical education.

The first Medical School founded in the Colonies was in 1765 in the College of Philadelphia, now the University of Pennsylvania. In 1767 there was organized in Kings College (now Columbia University) a second Medical School. The curriculum of the latter School was suspended in 1776.

The Harvard Medical School is now nearing the close of its second century of teaching dedicated to the treatment and prevention of the ills of man.

On September 19, 1782 the President and Fellows of Harvard College adopted a report by President Joseph Willard and former Acting President Edward Wigglesworth embodying a plan for a medical school. This action was followed on November 22, 1782 by the appointment of Dr. John Warren of Boston as the first Professor of Anatomy and Surgery. In December, 1782, Dr. Benjamin Waterhouse became Professor of the Theory and Practice of Physic. The original faculty was completed in May, 1783, when Dr. Aaron Dexter was named Professor of Chemistry and Materia Medica.

The first degrees of Bachelor of Medicine were conferred in 1788. Until 1811, the degrees of Bachelor of Medicine and Doctor of Medicine were conferred, the former on graduation from the Medical School, the latter on examination at least seven years after graduation. In 1811 the degree of Doctor of Medicine was granted to graduates of that year and to earlier graduates who had not been admitted to it. All graduates since 1811 have received the degree of Doctor of Medicine.

During its long history, the Medical School has occupied seven different sites. First meetings of the classes were held in the basement of Harvard Hall in the Harvard Yard. In 1783 classes were

transferred next door to Holden Chapel, now the home of the Harvard Glee Club. To be close to such hospital facilities as might be developed in Boston, the Medical School, in 1810, moved out of the Yard to quarters at 49 Marlborough Street (now 400 Washington Street) in Boston. Six years later, the Medical School occupied the first structure built especially for its use, located on Mason Street in Boston. At this time, and for a period of 42 years thereafter, the School bore the title of "The Massachusetts Medical College of Harvard University."

In 1847, the Medical School again moved to new quarters at North Grove Street opposite the Massachusetts General Hospital. The next relocation of the School, in 1883, was at 688 Boylston Street. This, it was expected, would be the "home of medicine for generations." The School's vigorous growth soon made these quarters inadequate. Accordingly, new — and current — buildings were erected on Longwood Avenue. At their dedication on September 25, 1906, Dr. Charles W. Eliot, President of the University, in his acceptance address, described them as: "The largest single addition to the resources of the University which has ever been placed in the hands of the Corporation since it received its charter in 1650."

it received its charter in 1650."

The present Medical School occupies 11 acres of an original 26 acre tract. The remaining 15 acres were reserved at the time for the hospital facilities that, it was expected, would be built around the School. Four hospitals and the Harvard Schools of Dental Medicine and Public Health are now located in this general area.

Five main buildings comprise the current Medical School. One houses the Library, Anatomical Museum and the administrative offices. Four others house the School's academic departments with extensive facilities for laboratory and clinical instruction and for research.

Prior to 1906 most clinical teaching was carried on in the Massachusetts General and Boston City Hospitals. Opportunities for clinical teaching have increased greatly, since the Longwood Quadrangle was established, through the new hospitals surround-

ing the School and affiliated with it. Currently, no other medical school either in the United States or abroad can offer to its students the tremendous variety of clinical opportunities for teaching and investigation. Clinical advantages, from the student viewpoint, are not a matter of large hospitals only, but rather are related to the number of patients in these hospitals who are under the care of instructors on the staff of the Medical School and thus available for teaching purposes. Each student comes into intimate contact, under supervision, with patients in these hospitals, beginning in the second half of the second year. This student-patient relationship grows steadily during the third year. In the fourth year students serve as clinical clerks and give their whole time to the study of patients.

#### BUILDINGS

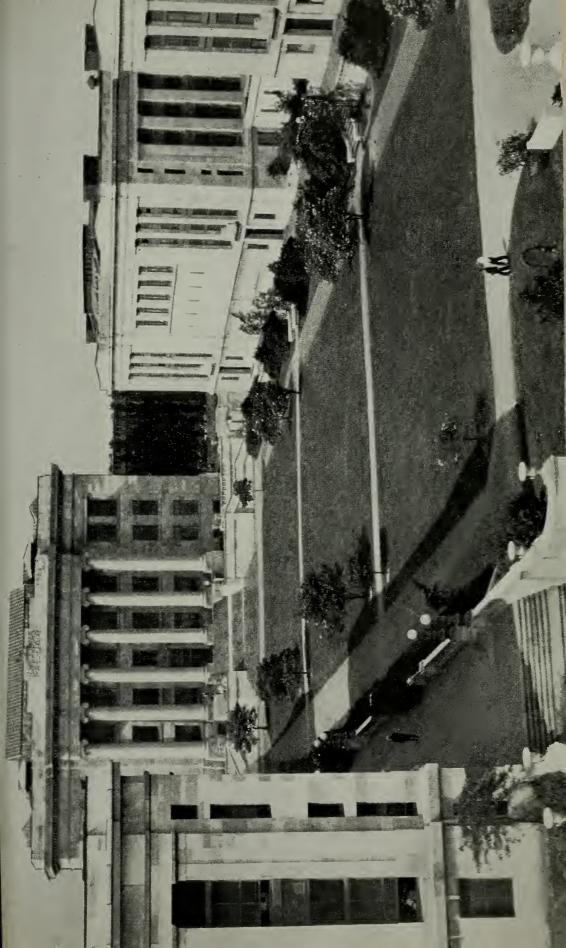
The Administrative Building (A), with over 40,000 square feet of floor space, contains the Faculty Room, the Administrative Offices of the Medical School, the Alumni Office, the Courses for Graduates Office, the joint library of the Medical School and the School of Public Health, the Women Students Club Room, the Warren Museum and the News Office.

The laboratory buildings, designated by the letters B, C, D, and E, are all constructed on the same general plan. Three consist of two parallel wings united at the front by an amphitheatre with a seating capacity of two hundred and fifty. The fourth (Building B) has been remodeled to provide added research laboratory facilities. Both the smaller rooms and the laboratories are designed on a unit system which greatly simplifies the changes required in suiting these to the needs of departments whose methods of teaching have changed since the rooms were originally designed.

The amount of floor space varies considerably in each of the

The amount of floor space varies considerably in each of the four buildings, but the design is such that this variation is not apparent from the main quadrangle.

Building B accommodates the Departments of Anatomy, Histol-





A, B, C, D, E. Harvard Medical School buildings. 1. Harvard School of Public Health. 2. Children's Hospital. 3. Beth Israel Hospital. 4. Vanderbilt Hall. 5. Boston Lying-in Hospital. 6. Harvard School of Dental Medicine. 7. Peter Bent Brigham Hospital.

ogy, Embryology and Pharmacology. One wing has three floors, the other wing has five floors.

Building C provides space for the Departments of Physiology,

Building C provides space for the Departments of Physiology, Biochemistry, and Experimental Surgery. In this building each wing has four floors and a total floor space of 72,000 square feet. Building D is occupied by the Departments of Bacteriology, Biophysics, Pathology, Preventive Medicine, the Division of Medical Sciences, and also laboratories of the Department of Medicine. In this building there are five floors in one wing and three floors in the other, with a total floor space of over 72,000 square feet. The amphitheatre in this building has recently been renovated and is air-conditioned for student comfort. There are animal houses between Buildings B and D and between Buildings C and E.

Building E houses Legal Medicine and Tropical Public Health. There are three floors in one wing and four floors in the other, with a floor space of 50,000 square feet.

The clinical departments are housed in the various hospitals

associated with the School. Vanderbilt Halls (4), the dormitory for male and female medical students, is immediately adjacent to the Medical School buildings.

#### HOSPITAL FACILITIES

#### THE MASSACHUSETTS GENERAL HOSPITAL

This general hospital, founded in 1811, in great part owes its existence to the foresight and ambition of two Harvard College graduates, Dr. John Warren, who became the first Surgeon-in-Chief, and Dr. James Jackson, the first Physician-in-Chief. Dr. Warren, in 1782, was named the first Professor of Anatomy and Surgery in the Medical School.

In a circular letter addressed (August, 1810) "to the most influential and wealthy citizens of Boston," Drs. Warren and Jackson noted the benefits that would accrue to the ill of the community through establishment of a hospital, and to the collateral advantages that would follow.

Among the latter, they wrote, "are the facilities for acquiring knowledge which it (the hospital) would give to the students in the medical school (Harvard) established in this town."

In 1811 the Massachusetts Legislature approved an Act to "incorporate certain persons, by the name of The Massachusetts General Hospital." The list of incorporators read much as a "Who's Who" of early America. Prominent in the list were the names of John Adams and John Quincy Adams.

The original charter sets out that the hospital was to care for the sick and insane persons of the Commonwealth.

The close and salutary relationship established at the outset between the Medical School and the Hospital has continued to the present.

In the Hospital there are services in medicine, surgery, pediatrics, dermatology, genito-urinary diseases, orthopedics, gyne-cology, neurology, neurosurgery, anaesthesia and psychiatry, all of which are used in giving instruction in these special depart-ments of medicine. The hospital has 916 beds, 451 of them being available for teaching purposes. In the General Hospital, 23,628 patients were admitted in 1957. Large clinics are also used for instruction in the above clinical subjects. Clinic visits numbered 187,047 last year, of which 13,173 were first visits of new patients. 32,036 patients were treated in the emergency ward. Laboratories for pathology, bacteriology, chemistry, metabolism, medical and surgical research, and X-ray are maintained, and there is an excellent medical library, all of which are open to students in the Medical School.

In 1942 arrangements were made with the Vincent Memorial Hospital and the Hall-Mercer Hospital to care for their patients in the Massachusetts General Hospital. The Vincent occupies the three lower floors of the Vincent-Burnham Building, the three

top floors comprising the Burnham Memorial for Children.
In 1943 the Collis P. Huntington Memorial Hospital and its associated laboratories of the Harvard Cancer Commission were transferred from their former location adjacent to the Medical School to the buildings of the Massachusetts General Hospital.

#### THE MASSACHUSETTS EYE AND EAR INFIRMARY

This hospital, incorporated in 1827, and associated with the Medical School since 1866, is equipped for teaching and research in diseases and conditions of the eye, ear, nose and throat. The two Chiefs of Service are Professors of the Faculty of the Medical School. There are service laboratories for bacteriology and pathology. Fourteen of the laboratories, among them the Howe Laboratory of Ophthalmology, are housed in a three story wing opened in 1956. There are 169 beds for service, semi-private and private patients, the majority of them available for teaching. The clinics serve ambulatory medical and surgical patients and during the past year (1957) recorded 65,615 clinic visits. Of the 8,054 patients admitted to the hospital, 7,799 or 96.8% came for surgery.

#### McLean Hospital

This hospital, situated in Belmont, is a division of the Massachusetts General Hospital for the care and treatment of patients with psychiatric disorders. McLean Hospital was the first hospital in New England and is the third oldest mental hospital in the United States. It has a capacity of 266 beds and has been a teaching hospital connected with the Harvard Medical School for many years. During the past year 245 patients were admitted to the hospital and 266 patients were discharged. It is equipped with laboratories for research in clinical physiology, neuropathology and neurochemistry, and clinical psychology. It maintains an experimental program in clinical application of social anthropology and sociology.

#### THE BOSTON CITY HOSPITAL

This hospital with all its divisions contains 1,661 beds, including 91 bassinets for newborn and 219 beds for infants and children. Over 300 are available to the teaching units of the Medical School. The Second and Fourth Medical Services, the Fifth Surgical Service, and the Neurological, Neurosurgical and Radiological Services are under the direction of Professors of the Harvard Medical

School, and in addition there are other specialties open to our students. In the Out-Patient Department and Accident Floor 106,491 patients applied for diagnosis and treatment during the year 1956.

The Thorndike Memorial Laboratory, established in 1923 for medical research, includes a metabolism ward and is an integral part of the Harvard Medical Unit. It is an internationally known center of medical investigation in the treatment of blood disorders, infectious diseases and disorders of the liver, kidney, thyroid and heart. The Sears Surgical Laboratory, established in 1955 as part of the Harvard Surgical Unit, is associated with the Fifth Surgical Service under the direction of the Professor of Surgery who is Head of that Service. It provides a modern amphitheatre, conference rooms, animal quarters, library, and laboratories for surgical research. The Departments of Neurology and of Pathology also maintain active research laboratories. In addition there are well-equipped service laboratories for pathology, chemistry, metabolism, and immunology. Four amphitheatres and various conference rooms are used in student instruction. The hospital maintains an admirable general working library and two special libraries.

#### THE PETER BENT BRIGHAM HOSPITAL

This hospital has been closely associated with the Medical School since its dedication in 1913. The hospital, equipped for teaching and research in physical diagnosis, medicine, surgery and radiology, and pathology is situated on grounds adjacent to the Medical School buildings. The Chiefs of Service are Professors of the Faculty of the Medical School. There are 286 beds, all of which are used for teaching purposes. During the past year, 6,385 patients were admitted. There is also maintained an out-patient service and emergency ward for ambulatory medical and surgical patients. The total number of visits was 45,624. There are well-equipped medical, surgical, and pathological laboratories. Also located within the hospital are the offices of the Harvard Medical Center Health Clinic.

#### THE BETH ISRAEL HOSPITAL

This is a general hospital with a capacity of 457 beds (including 30 pediatric, 72 obstetrical, and 91 bassinets); of these beds 150 are constantly available for teaching. In addition to the ward beds many private beds are available for teaching. Incorporated in 1916, this institution has been located on Brookline Avenue around the corner from the Harvard Medical School since 1928 and has a close working relationship with it. The hospital is equipped for teaching and research in medicine, surgery, pathology, pediatrics, psychiatry and radiology, each under the direction of one or more full-time physicians who are associated with the Faculty of the Harvard Medical School. There are also electrocardiograph, electroencephalograph, chemistry and metabolism laboratories, animal research facilities, an extensive X-ray department with facilities for X-ray therapy, and a department of physical medicine and rehabilitation. During the past year, more than 30,000 patients received care through this Hospital as in-patients, out-patients, in emergency ward or through the Home Care Program. Out-patient visits totalled 56,572. There were 11,886 patients admitted to the Hospital and 2,679 deliveries.

#### THE CHILDREN'S MEDICAL CENTER

This is an affiliation of several voluntary institutions concerned with the care of the younger age group. Included are the following:

#### The Children's Hospital

This hospital has been located on Longwood Avenue adjacent to the Medical School since 1914. It is a general hospital for the care of children from infancy through adolescence. Medical, pediatric, surgical, neurosurgical, orthopedic, dental, radiologic, psychiatric, and pathologic services with their associated specialties are maintained. Special clinical facilities are provided for ado-

lescents. There are 304 beds, of which 282 are available for teaching. During the year 1956–57 it rendered 75,518 days of care to 8,013 admissions. (These figures are inclusive of Children's Hospital, Infant's Hospital and Sharon Sanatorium.) Full laboratory and diagnostic services are provided for the study of material from the house and out-patient services.

#### The Sharon Sanatorium

This organization sponsors the Sharon Cardiovascular Unit composed of 24 beds devoted to the care of non-rheumatic cardiovascular disorders including congenital heart disease. It is included in Children's Hospital as described above. In the year 1957 a total of 911 patients were admitted.

#### The Infants' Hospital

Originally the Thomas Morgan Rotch, Jr. Memorial Hospital for Infants, this hospital has operated for many years in close conjunction with the Children's Hospital since 1923. There are 40 beds which are devoted to the care of infants in addition to a separate neonatal nursery accommodating 12 infants under the age of one month, including prematures. 1,432 patients were given 10,832 days of care during 1957. All cases in this hospital are available for teaching purposes.

(New Building. — The above three units occupy a new structure fully consolidating these facilities opened in 1956.)

#### The House of the Good Samaritan and The Hospital and Convalescent Home for Children

The House of the Good Samaritan is situated at 25 Binney Street adjacent to the Medical School. There are 64 beds devoted to the care and study of rheumatic fever and rheumatic heart disease. In the year 1957, a total of 203 patients were given 10,719 days of care. There is a research department for the study of rheumatic fever and rheumatic heart disease. All beds are available for teaching purposes.

The Hospital and Convalescent Home for Children, situated in

Wellesley Hills, operates as an adjunct to the facilities for care of acute cases at 300 Longwood Avenue and vicinity. It provides 47 beds including 12 beds for care of long-term respiratory paralysis. During 1957, it rendered 10,038 days of care to 113 admissions. All cases are available for teaching purposes.

These units offer care after the acute phase of illness. In 1958 title to the premises of The House of the Good Samaritan, at 25 Binney Street, was transferred to The Children's Medical Center. Clinical activities are the responsibility of Children's Hospital. Remodelling of this area, later in 1958, will provide a center for long-term care. The study and treatment of rheumatic diseases will continue, while other convalescent care formerly provided in a surburban setting at the Hospital and Convalescent Home will also be available. Facilities for long-term care of patients with respiratory paralysis will also be available in the new setting.

#### The Children's Mission to Children

A social service organization, cooperating in home care and placement programs for children affected by illness and in need of such service.

#### The Children's Cancer Research Foundation

An independent institution working with its staff and facilities integrated with those of the Children's Medical Center, provides in conjunction with its research program care and treatment to children with disseminated cancer. This facility for the care and study of over 200 patients is available for teaching purposes.

#### The Judge Baker Guidance Center

A child psychiatry clinic whose treatment, training, and research programs are affiliated with those of the Department of Psychiatry of the Children's Medical Center, with one clinical head of Psychiatrist-in-Chief of the latter. During 1956, the Guidance Center gave psychiatric service to 3,054 children and their parents. This unit is presently constructing a building in close proximity

to Children's Hospital, expanding and integrating the program in psychiatry.

#### THE BOSTON LYING-IN HOSPITAL

This hospital occupies a building completed in 1922 at 221 Longwood Avenue. There are 203 beds, of which 97 are on the ward service and 106 are on the private service. During the past year there were 7,655 adult admissions to the hospital. A total of 6,025 births were recorded. Chemical, pathological, bacteriological and blood bank laboratories, and a well-equipped X-ray department are available for research. The Hospital has been in continuous existence since 1873.

#### THE FREE HOSPITAL FOR WOMEN

This hospital is devoted exclusively to the care of women, with emphasis on the treatment of diseases peculiar to them. It has 92 beds, of which at least 32 are available for teaching. In 1956–57, 2,863 patients were admitted, of whom 2,638 were operated on. In the out-patient department 11,405 patients were seen during this time, of whom 1,689 were new. In addition to standard laboratory facilities and a library, it has laboratories for research, oriented chiefly toward pathology, reproduction and neoplasia.

#### MASSACHUSETTS MENTAL HEALTH CENTER

This is a state institution for acute, curable, incipient, and doubtful cases of mental disease. The hospital was opened to patients in June, 1912 as a department of the Boston State Hospital. It became a separate institution in 1920. It has 139 beds, of which 14 are available for children. All of the beds are available for teaching and receive patients at the rate of about 1,000 a year. The hospital is equipped with psychological, clinical, biochemical, and research laboratories. The out-patient department which is made up of an adult and child division in 1954–55 received 800 new patients — total patient days during this period numbered about 15,000. In addition to the psychoses and neuroses, the clin-

ical material includes cases of maladjustment, personality problems, behavior disorders of childhood and mental defect.

#### New England Deaconess Hospital

A 375-bed general hospital which includes the Deaconess, Central, George F. Baker and the Palmer Memorial buildings for general beds; the Hospital Teaching Unit for ambulatory patients; the Channing building for patients requiring intensive short-term psychiatric care, and the Cancer Research Institute. Sections of the hospital are especially equipped for diabetics; other sections are devoted to cancer, neurosurgery and thoracic surgery. It owns deep therapy equipment including a two million volt X-ray machine and radium. It maintains a Social Service department, outpatient tumor clinic, out-patient clinic for those receiving shock therapy and conducts numerous research projects.

#### VETERANS ADMINISTRATION HOSPITAL (WEST ROXBURY)

This is a 304-bed hospital for the care of general medical and surgical patients, incorporating a center for the care of patients with spinal cord injuries. All the beds are available for teaching; there were 2456 admission during the past year.

The hospital is administered by the Veterans Administration but is professionally closely associated with the Peter Bent Brigham Hospital (8 miles distant), with which it is affiliated for the training of residents. It has complete laboratory and X-ray facilities, a research laboratory, and its own library.

Other hospitals in the Greater Boston area in which some teaching activities are carried on include: Cambridge Tuberculosis Sanatorium (physical diagnosis); Haynes Memorial Hospital (pediatrics); Long Island Hospital (physical diagnosis); Lemuel Shattuck Hospital; Metropolitan State Hospital; Middlesex County Sanatorium; Mt. Auburn Hospital (radiology); Peabody Home for Crippled Children; and the Pondville State Hospital.

#### HOSPITAL APPOINTMENTS

An active service is maintained to aid senior students in securing suitable hospital appointments as interns. Boston hospitals affiliated with the School make about one hundred such appointments each year. Internships for the Class of 1958 are listed in the back of the catalogue.

#### SCHOOL OF DENTAL MEDICINE

Details of The Harvard School of Dental Medicine program are available in the School's Official Register.

The Harvard School of Dental Medicine offers a four-year course leading to the degree of Doctor of Dental Medicine.

The requirements for admission parallel those of the Medical School, except that the Dental Aptitude Test is required in place of the Medical College Admission Test. Qualified students and graduates of approved medical schools who wish to specialize in dentistry may be admitted to the School of Dental Medicine with advanced standing.

During the first two academic years the courses of instruction are nearly identical with those of the Medical School. The third and fourth years are under the direct supervision of the staff of the School of Dental Medicine. The recipient of the degree of D.M.D. from the School of Dental Medicine is well prepared to meet State Board requirements for license to practice dentistry. Graduates are also ready for the advanced study and experience recommended for any of the specialties of dentistry.

Access to the research laboratories of the School in the elective time during the third and fourth years permits unusual training for those having dental research in mind as a career.

#### LIBRARIES

The Library of the Schools of Medicine and Public Health consists of:

Main Library (Administration Building, 2d floor)

Open: 9 a.m.–10 p.m. weekdays 9 a.m.– 5 p.m. Saturdays 2 p.m.– 6 p.m. Sundays

Anatomy Library (Building B, 3d floor)

Bowditch Library of Physiology and Biochemistry (Building C, 3d floor)

George Burgess Magrath Library of Legal Medicine (Building E, 3d floor)

Library of Dental Medicine (188 Longwood Avenue)

Lucien Howe Library of Ophthalmology (at the Massachusetts Eye & Ear Infirmary)

The card catalog in the Main Library shows the holdings of these libraries which contain 330,000 catalogued volumes and

pamphlets and receive 850 periodicals currently.

The Main Library contains several collections of historical interest. The largest of these is the Warren Library, consisting of books and pamphlets on scientific and medical subjects collected by five generations of the medical men in one family. The Library was started by Dr. John Warren, first Professor of Anatomy and Surgery in the Medical School (1782), and was bequeathed to Harvard University by Dr. John Warren who taught Anatomy in the School from 1901 to 1928. The collection spans the years between 1476 (Caius Pliny, Secundus: Historia Naturalis) and 1928. Among the rarer volumes are Andreas Vesalius' De Humani Corporis Fabrica (1543), and William Harvey's De Motu Cordis and Sanguinis in Animalibus, 2d ed. (1639).

All members of the University may borrow from the College Library at Cambridge. Messenger service is provided daily from the College Library and various other University Libraries.

The Boston Medical Library, located at No. 8 The Fenway, is the third largest medical library in the United States. It contains 230,000 cataloged volumes, 160,000 cataloged pamphlets, and 1,300 periodical titles currently received. Author cards for its books are filed in the Harvard Medical School catalog, and books and periodicals are available by messenger. Students wishing to go to the Boston Medical Library to read may do so week-

days 9 a.m. to 5 p.m., Saturdays 9 a.m. to 1 p.m. and evenings Monday and Thursday until 9 p.m.

The Boston Public Library issues cards to permanent and to temporary residents of Boston. Others may obtain cards upon payment of a small fee. Other Libraries of the Boston area, notably those of the Massachusetts Institute of Technology, add to the total book and periodical resources available to students.

The librarian is Ralph T. Esterquest, and Charles Sidney Burwell is chairman of the Library Committee of the Faculty.

#### WARREN ANATOMICAL MUSEUM

The Warren Anatomical Museum was founded in 1847 by John Collins Warren, of the College Class of 1797, Adjunct Professor of Anatomy and Surgery from 1809 to 1815, Hersey Professor of Anatomy and Surgery from 1815 to 1847, Professor Emeritus from 1847 to his death in 1856, son of John Warren, the first Hersey Professor of Anatomy and Surgery.

During the academic year the Museum is open to physicians and medical students from 10:00 A.M. to 4:30 P.M. from Monday through Friday except holidays. All collections of the Museum and necessary space and facilities are available for those who wish to make use of them for professional study. Rotating teaching exhibits of medicine, surgery, biological sciences, and history of medicine are presented in the main hall of the Museum during the school year.

Other persons interested in visiting the Museum may do so Tuesdays and Thursdays during the same hours, individually or in groups, on authorization of the Curator to whom application may be made.

Occupying the third, fourth and fifth floors of Building A, the Museum contains some 12,000 anatomical and pathological specimens and many treasured mementoes of the Medical School collected from its foundation in 1782. The collections illustrate the changing orientation of medical thought and methods of teaching from the early 19th century. These include many models

and dry and mounted specimens among which the Dwight osteological collection is notable. A large neuroanatomical and neuropathological collection has been recently added and is displayed in the main hall of the Museum.

Dr. Paul I. Yakovlev, Clinical Professor of Neuropathology, is the Curator of the Museum.

# REQUIREMENTS FOR ADMISSION

Candidates for admission to the first year class must present evidence satisfactory to the Committee on Admission, not simply that they have passed the courses necessary to fulfill the requirements, but also that their college work and other credentials have been of such character as to give promise of work of high quality in the medical course. A broad general education including the attainment of competence in English, biology, chemistry and physics is essential for the comprehension of the medical school curriculum. For most students this will require at least three and probably four years of college education. Superior students whose education has for one reason or another been delayed may, in selected cases, be considered acceptable for admission to medical school after only two years of collegiate work. In all instances, the final judgment as to the admissibility of any student rests with the Harvard Medical School Admission Committee.

In general, the School considers for admission students in good standing in arts or in sciences in colleges listed as approved in the Higher Education Directory, published by the Office of Education of the United States Department of Health, Education, and Welfare, or in any of the institutions included in Approved Colleges of Arts and Sciences, published by the Council on Medical Education and Hospitals of the American Medical Association, 535 North Dearborn Street, Chicago, Illinois. (Colleges of optometry, veterinary medicine, agriculture, as well as junior colleges and evening and university extension courses are not ordinarily included in the approved list. Unless the premedical courses taken in such an institution are identical with those given

in an approved university with which it is associated, credits earned therein will not be acceptable to the Committee.) Credentials from foreign universities, in most cases, must be supplemented by a year or more of work in an American university. Admission cannot be assured as the classes of the Medical School and the School of Dental Medicine are limited by Faculty rule to 114 students in the Medical School and 16 students in the School of Dental Medicine. Applications will not be accepted from candidates who have been refused admission on two prior occasions.

In order to meet the present legal requirements of state licensing boards and to have the needed basic understanding, the following specific college credits must be secured:

Biology: The student should take a general course in biology which should emphasize the structure, function, natural history, and evolution of plants and animals. A course in comparative anatomy or embryology is distinctly recommended but bacteriology, human anatomy, and histology will not be considered as meeting the biology requirements. A satisfactory course should show college credits of at least eight semester hours.

Chemistry: The student should acquire a sound understanding of the basic principles of chemistry, both inorganic and organic. He must have taken not less than 16 semester hours of chemistry, which should be about equally divided between inorganic and organic chemistry. Biochemistry will not be accepted as meeting these requirements.

To be prepared adequately for the work in chemistry in the Medical School it is desirable that the student have had experience with the application of chemical laws to gases and solutions, and some experience with quantitative techniques (particularly volumetric analysis).

Physics: The student should acquire an understanding of the general principles of physical laws and phenomena, and have experience in mechanics, heat, light, sound, and electricity. College credit for eight semester hours must be secured.

The above science courses must be accompanied by laboratory work taken as a part of the college course.

In the instances of applicants who have received college credit on the basis of work done in high school or preparatory school for any of the required courses listed above, such credit will be accepted by the Medical School as fulfilling the requirements for the particular course or courses involved, provided the Medical School receives from the Dean's Office of the college concerned a written statement setting forth precisely what credit has been given.

English: The student should have facility in the use of English in speech and composition. A one year course in which composition is included is acceptable but two years of college English are recommended. Even though, in the judgment of the authorities of the applicant's college, he has obtained enough training in secondary school to be exempted from the usual beginning course in English, an advanced course in English is strongly recommended.

Modern Language: The student should have a reading knowledge of a modern language important to medicine in addition to English. The Committee on Admission suggests French, German, Italian, Spanish, or Russian as suitable languages. A reading knowledge presupposes two years of high school and one year of college work, or two years of college work. If an applicant has fulfilled the language requirement for a Bachelor's degree by obtaining a sufficiently high score on the College Board examination or by passing a college language placement test in one of the above languages, he will be considered as having fulfilled the requirement for admission to medical school. Even in such cases, however, an advanced course in the same foreign language is strongly recommended.

The Medical College Admission Test of the Association of American Medical Colleges is required. Information about this

test may be obtained by writing to the Educational Testing Service, 20 Nassau Street, Princeton, New Jersey.

Interview: An interview may be required of any applicant. The Committee on Admission will inform an applicant if one is necessary in his case.

# ADMISSION TO ADVANCED STANDING IN THE HARVARD MEDICAL SCHOOL

The third year class may be increased by approximately 35, making place for transfer students from other medical schools. Vacancies in the second year class may also be filled by transferring students.

Only students of high scholastic standing will be considered. They must be vouched for as promising men by the Dean of the school from which they come and must furnish a certificate of time spent in medical studies at least equal to that spent by the class to which they seek admission. Full credit for work done elsewhere will be allowed as a rule. All the requirements for the first year class (including the Medical College Admission Test), must have been fulfilled by applicants for advanced standing.

Applications may be obtained at the Admissions Office approxi-

mately one year prior to the expected date of transfer.

# ADMISSION TO ADVANCED STANDING IN THE HARVARD SCHOOL OF DENTAL MEDICINE

The third year class may be increased by a small number of transfer students who have completed the equivalent of the first two years at the Harvard School of Dental Medicine. Vacancies in the second year class may also be filled by transferring students. No students may transfer to the fourth year class without a special vote of the faculty in each instance.

Only students of high scholastic standing will be considered. They must be recommended as promising candidates by the Dean of the school from which they come. Full credit for work done

elsewhere will be allowed as a rule, but in certain cases additional work may be required. Ordinarily such requirements can be completed during the summer holiday preceding transfer. All the requirements for the first year class must have been fulfilled by applicants for advanced standing.

## INFORMATION FOR SERVICEMEN

The qualifications for admission remain essentially the same for veterans as for civilian applicants. Before the acceptance of a veteran can become final, the applicant will need to submit photostatic copies of discharge papers or similar evidence of honorable release. Where available the applicant should file also a copy of his "Separation and Qualification Record" on which is listed in detail his service record and training. If the Committee does not act favorably on an application, certifications furnished by the applicant may be returned, at his request. It is the responsibility of the applicants to take the necessary steps toward obtaining government benefits for servicemen for which they are eligible. On request the Harvard Veterans Office can furnish a brief statement of the necessary procedures required by the Veterans Administration to receive such benefits. The University has established this office to form a central point for answering inquiries and advising veterans. For matters relating to veterans' affairs and not connected directly with the Medical School or the School of Dental Medicine, the applicant should feel free to write to the Harvard Veterans Office, Lehman Hall, Cambridge 38, Massachusetts.

# APPLICATIONS FROM FOREIGN STUDENTS

A candidate from a foreign university may file application for admission, but if he has attended a university or medical school which has not received approval by the Approving Authority of the Commonwealth of Massachusetts, he must receive specific approval from the Authority before he can be admitted. In general, it is the policy of the Committee on Admission to re-

quire that foreign students spend at least one year, and preferably two, studying at an undergraduate college in this country before applying for admission to the Harvard Medical School. This policy has been established in order both that the applicant may become familiar with the language, customs, and methods of teaching in the United States, and that the Committee may obtain a better evaluation of his qualifications and preparation for medicine. Exception to this policy may be made in the case of qualified applicants from medical schools in the British Isles.

Students seeking transfer to the second year class from foreign medical schools may be required to take the examinations in the first year subjects at the regular time they are given at the Harvard Medical School in January and June. Students applying for transfer to the third year at the Harvard Medical School will be required to pass successfully Part I of the examinations given by the National Board of Medical Examiners.

## FOREIGN STUDENTS

All students who are not citizens of the United States will be referred before registration to the Counselor for Foreign Students, 24 Quincy Street, Cambridge, where they must present a statement of admission, show their passports, and fill out a Student Registration form. They will then receive a card for presentation at registration, showing they have been cleared by the office of the Counselor for Foreign Students. This Office is prepared to furnish information to aliens on visa requirements, permissible employment, income tax liabilities, Selective Service regulations, and many other official restrictions in effect under existing laws of the United States.

## GENERAL REGULATIONS

In order that the time of study shall count as a full year, students of all upper classes must register on the first day of the session.

A fee of \$10 is charged for late registration.

For special and approved purposes fourth year students may be allowed to take a portion of their work elsewhere than at the Harvard Medical School, provided the application be approved by the Dean in consultation with the Administrative Board and the head of the department concerned, and provided the student passes an examination on this work after its completion, con-ducted by a member of the Faculty of the Harvard Medical School.

### Examinations and Promotion

Promotion from one class to another is contingent upon the satisfactory completion of the required work of each year. In each course, when indicated, students will be informed by their instructors as early as possible when the progress of their work is unsatisfactory.

Final grades in each course will be based upon such examinations or other tests as are determined by each department. Grading is on the scale of A, B, C, D, and E (denoting failure).

Grades are averaged on the basis that A = 1, B = 2, C = 3,

D = 5 and E = 8, and since the time devoted to courses varies, grade averages will take into account the time assigned to courses, giving them computation values as follows:

First Year: Anatomy 5; Histology 5; Physiology 5; Biological

Chemistry 5.

Second Year: Pathology 6; Bacteriology 4; Pharmacology 4; Physical Diagnosis 2; Laboratory Diagnosis 2; Surgery 2. Third Year: Medicine 6; Surgery 6; Pediatrics 3; Obstetrics 3;

Preventive Medicine 2.

Fourth Year: Proportional to month's work.

# **Promotion Boards**

Promotion Boards have been appointed for the first, second and third years to review the work of each student at the end of the year or, at their option, at other times. The membership of these boards consists of one representative from each department whose grading, as noted above, affects the student's grade

average and one member from the Committee on Examinations and not as voting members, the Dean or Assistant Dean, ex-officiis, and on the Promotion Boards of the first and second years, the Dean of the School of Dental Medicine, ex-officio.

It is the duty of the Promotion Boards to promote those qualified, to notify formally students whose work in any course is unsatisfactory—in certain cases requiring that such students repeat the year's work—and to recommend that unpromising students withdraw from the School.

Opportunity will be given to students to appeal the decision of a Promotion Board either at a special meeting or at the next regular meeting of the Board. Appeals must be sent to the Chairman of the Promotion Board, Harvard Medical School and, to be valid, be received by him within two weeks after the issuance of a Promotion Board's notice of formal action.

### General Examination

A committee will give a General Examination to each candidate for the degree of M.D. It will recommend to the Faculty those who pass and are otherwise qualified for the degree and for honors. The conditions under which a student shall take a General Examination and the character and content of the examination will be determined by the Committee subject only to rules of the Faculty.

A student becomes eligible to take a General Examination on successfully completing seven-eighths of his fourth year work. He may not anticipate the General Examination ahead of his class.

A student who fails three General Examinations is debarred from further attempts.

## **Rules Governing Promotion**

- 1. A student with a grade averaging, for one year, from D (5) to E (8) will ordinarily be required to withdraw from the School.
- 2. A student whose grade for one year averages from 4 to 5 will be warned that his work is unsatisfactory. At the Promotion Board's discretion such a student may be required to repeat the year's work, or to withdraw from the School.

- 3. A student who is set back a year must repeat at least two assigned subjects and then he will not be promoted unless he obtains a grade of C or better in both of these subjects.
- 4. A student who is warned by a Promotion Board that his work is unsatisfactory and yet is permitted to advance with his class must attain for the ensuing year a grade average which is significantly better than in his previous year, failing which he must repeat the year's work, or, at the Board's discretion, he may be required to withdraw from the School.
- 5. A student failing in any course and yet permitted to advance with his class may not be promoted a second time nor will he be allowed to take the General Examination until that failure is removed.
- 6. A student failing any course will have an opportunity for re-examination only at a time set by the Promotion Board or with a succeeding class or section.

### WITHDRAWAL FROM THE SCHOOL

The Faculty reserves the right to require the withdrawal of any student at any time when, in the opinion of his instructors, it is manifest that he is incompetent, or for any reason is unfit to continue his course.

A student may withdraw voluntarily from the School upon application to an Assistant Dean. Application for reinstatement by any student must be received in writing at least four months prior to the date of readmission and for favorable action must be approved by the Committee on Admission. After two years, favorable action will usually not be taken.

## **DEGREES**

## DEGREE OF DOCTOR OF MEDICINE

Every candidate for the degree of *Doctor of Medicine* at this University must be at least twenty-one years of age, and of good moral character. He must have fulfilled all the requirements for admission to this Medical School; give evidence of having studied

in a recognized medical school at least four full years, of which one year must be spent in the regular fourth year course of this School; have passed all the required examinations; have dissected the three parts of the body to the satisfaction of the demonstrator; have taken charge of and reported on twelve cases in Obstetrics under supervision and instruction; and furnish evidence of having engaged in the practical exercises in Medicine and Surgery.

The degree of Doctor of Medicine cum laude, magna cum laude, or summa cum laude may be given to students of highest rating in the class, on recommendation of the Committee on Examina-

tions and the Faculty.

The degree of Doctor of Medicine cum laude, magna cum laude, or summa cum laude for a thesis in a special field may be awarded to candidates for the degree of Doctor of Medicine on recommendation of the Committee on Examinations and the Faculty. The work for this may have been carried out under the Tutorial System or by independent arrangement with any member of the Staff.

The degree is awarded for original and meritorious investigation in a single subject or group of subjects and for evidence of ability, scholarship and persistent interest and industry. Candidates wishing to be considered for such honors in a special field must apply to the Dean's Office not later than March 1 of the year of graduation and must submit two typewritten copies of an original thesis prepared in form usual for publication. The written approval of the head of the department in which the work was completed must be attached.

The thesis should include an introduction with references to relevant literature; a brief statement of the purpose of the study; a description of the materials and methods employed; an account of the original observations included; a discussion of the results; a summary; and a list of the references used.

No candidate is eligible to graduate with honors for a thesis in a special field unless he has done creditable work in his regular curricular studies and has passed the General Examinations. In addition, any candidate whose qualifications are acceptable for

honors in a special field must pass an oral examination before the Subcommittee on Honors in a Special Field and invited special examiners in which he will be examined not only on the subject of his thesis but on the general field of which it is a part.

Every candidate for the degree of M.D. must make application for it in writing on blanks furnished at the Dean's Office, on or before April 1.

### HIGHER DEGREES IN THE MEDICAL SCIENCES

The degrees Doctor of Philosophy, Master of Arts, and Doctor of Medical Sciences have been established for advanced work in some special field in the medical sciences. The first two degrees are administered by the Faculty of Arts and Sciences, through the Division of Medical Sciences, which consists of faculty members of the preclinical departments of the Medical School. The third is administered by the Faculty of Medicine. All candidates for these degrees must hold a degree in Arts or in Sciences from an approved college.

Candidates for the Doctor of Philosophy and Master of Arts degrees are registered in the Graduate School of Arts and Sciences for study in the Division of Medical Sciences. Students interested in graduate study in the Division should see the General Announcement of the Graduate School of Arts and Sciences and the pamphlet entitled Higher Degrees in Medical Sciences. These can be obtained by men from the Harvard Graduate School, 24 Quincy Street, Cambridge 38, Massachusetts; or by women from the Radcliffe Graduate School, Radcliffe College, Cambridge 38, Massachusetts.

Inquiries should be addressed to the Chairman of the Division of Medical Sciences, 25 Shattuck Street, Boston 15, Massachusetts.

# Doctor of Philosophy and Master of Arts

The major aim of the Division of Medical Sciences is to prepare graduate students for careers of research and teaching in the basic medical sciences. Since the graduate student may elect a

program of study suited to his individual requirements, he may concentrate on his field of special interest early in his training, without the obligation of spending two or three additional years in clinical studies which are required for the degree of Doctor of Medicine.

Candidates for admission should have a thorough grounding in the biological and physical sciences. This will usually be more than the minimum for admission to medical school. Advanced than the minimum for admission to medical school. Advanced courses in biology, chemistry, and physics are ordinarily regarded as preferable to undergraduate courses in bacteriology, biochemistry, histology, etc. A reading knowledge of German and one other modern language is desirable but not required for admission. The candidate will be required, however, to pass an examination in German and one other foreign language before graduation.

The graduate student in the Division devotes a major portion of his time to original experimental investigation which he undertakes in conjunction with formal courses designed as a preparation for his special field. During the period when he is taking formal courses, he may choose the type of problem which interests him most among the wide range of research activities of members of the Division.

bers of the Division.

The Division offers to entering students a new type of course, Medical Sciences 201ab, which is designed to introduce the student to the literature, experimental methods and fundamental principles associated with each of the preclinical sciences—anatomy, bacteriology, biochemistry, pathology, pharmacology and physiology. The establishment of this course represents a new departure in the training of candidates for the Ph.D. degree within the Division. Studies center around the functional and morphological characteristics of cells, organs, and organ systems, and each topic selected for study is approached from the various points of view represented by the different sciences. This course is given in a laboratory specially designed to permit the integrated study required by this approach. This course will ordinarily constitute the entire program of study for first year graduate students in the Division. After completion of the course, the student may enter any one of the special fields to carry out his or her more advanced studies and thesis work. These advanced studies may include courses in the Departments of Biology, Chemistry, and Physics in Harvard College.

The minimum requirement for the degree of Doctor of Phi-

losophy consists of not less than two years — at least one and a half of which must be in residence at Harvard or Radcliffe devoted to advanced studies approved as suitable preparation for the degree by the proper department. Ordinarily three or more years are required for the completion of formal courses and preparation of a thesis. In estimating the amount of a candidate's study for the degree, the advanced work done in other graduate departments at Harvard or of other universities will be considered.

It is expected that the preparation of a thesis will require full time for usually not less than one and a half years. It must show original treatment of a fitting subject, give evidence of independent research, and be clearly, logically, and carefully written in good English. Following acceptance of his thesis, the candidate is given an oral Final Examination on the subject of his thesis and

its relation to his special field and collateral subjects.

The minimum requirement for the degree of Master of Arts consists of a full year of residence and study. At least one quarter of the work must be more advanced than the regular introductory courses offered by the various departments, and should consist of research or individual preparation for research. In addition, each student must pass an examination in French or German. In some departments a thesis is required for the degree.

## **Doctor of Medical Sciences**

Candidates for this degree must matriculate as medical students and complete with an honor grade the regular elementary courses offered by this School, together with such other subjects as may be recommended by the Faculty. Ordinarily this preparatory training will be equivalent to the first two years of the course of study leading to the degree of M.D. In addition, all candidates are required to have a reading knowledge of French and German.

In estimating the amount of a candidate's study for the degree, study completed in other approved medical schools will be considered.

Following the completion of this preliminary training, the student shall devote himself for not less than two years to the intensive study of one of the fundamental medical sciences and to the preparation of a thesis. The thesis must show an original treatment of a fitting subject and give evidence of independent research.

There shall be two examinations for every candidate for this degree: a general examination, before entering upon the work of the last two years, covering the elementary medical sciences; and a final examination, upon acceptance of the thesis, covering the particular medical science chosen as a special field.

The fees for the first two years are the same as for medical students.

### STUDENT EMPLOYMENT

The Dean's Office makes every effort to assist students in obtaining part-time work during the college year when a student's standing is such that it is felt he can carry outside work, and full-time work during the summer vacation. The service is furnished without cost either to the student or to the employer.

Only a limited amount of outside work can be done without being a tax on a student's health and scholarship, and the student is urged, when it is possible, to devote himself to a regular program of study and recreation, giving as little time to outside work as is feasible with his plan for financing his medical education. A number of positions offering room and board in return for laboratory or minor clinical services in hospitals are available to second, third, and fourth-year students. Fewer opportunities are open to first-year students.

## **MICROSCOPES**

The School requires that each student secure a standard student microscope, preferably less than twenty years old, with a mini-

mum of two oculars and three objectives including an oil immersion lens. A mechanical stage is not essential. The minimum requirements are as follows:

- 2 oculars 5X and 10X
- 1 oil immersion objective
- 1 16mm. objective
- 1 4mm. objective
- I complete substage —Abbe condenser and Iris diaphragm In addition, the following are recommended by the Department of Pathology:

1 scanning objective 2-3X 1 quadruple nosepiece.

Under the auspices of the Vanderbilt Hall Committee, arrangements have been made for the *quantity* purchase, at a substantial discount, of the standard American, certain German and Japanese microscopes. The standard American and German monocular microscopes currently retail at about \$350, binoculars at about \$550.

Further information about the quantity purchase plan will be sent to each student.

The Medical School has about fifty microscopes available for rental each year to first-year students unable to provide their own. The rental charge is \$10 a half year. A rental microscope will be reserved for each student who applies for one by *April 15*.

## FEES AND EXPENSES

An estimate of total yearly expenses shows that the average cost of the school year is approximately \$2,500 for each academic year. This estimate includes tuition, medical health fee, board and room, books, laundry and incidentals.

The fees are: — For matriculation, \$5; for medical health fee, \$68.00 for each year; for instruction (including laboratory charges except microscope rental, breakage, damage and loss of apparatus), \$1,000 for each year.

Term-bills for the year 1958–59 are issued and payable as follows:

Issued	Payable	Basic Charges
At Regis-	Presenta-	1/4 Tuition for the year
tration	tion	1/2 Medical Health Fee
Nov. 20	Dec. 10	1/4 Tuition for the year 1/4 Board for the year (Undergraduates) Board through Oct. 31 (Graduates) 1/4 Room Rent for the year Coupon Books through Oct. 31 Miscellaneous Charges
Jan. 20	Feb. 10	1/4 Tuition for the year 1/2 Medical Health Fee 1/4 Board for the year (Undergraduates) Board through Dec. 31 (Graduates) 1/4 Room Rent for the year Coupon Books through Dec. 31 Miscellaneous Charges
Apr. 21	May 11	1/4 Tuition for the year Additional Course Fees for the year 1/4 Board for the year (Undergraduates) Board through March 31 (Graduates) 1/4 Room Rent for the year Coupon Books through March 31 Miscellaneous Charges
June 3 *	June 10	Board for the year (Undergraduates)     Board to the end of year (Graduates)     Room Rent for the year     Coupon Books to the end of the year     Miscellaneous Charges
June 30	July 15	Board for the year (Undergraduates)     Board to the end of year (Graduates)     Room Rent for the year     Coupon Books to the end of the year     Miscellaneous Charges

<sup>\*</sup> Applies only to candidates for degrees.

Bills for miscellaneous charges will be rendered at the time the indebtedness is incurred.

All indebtedness to the University must be paid by all candidates for degrees at least one day before Commencement.

Students who are candidates for degrees in the middle of the academic year must pay all dues to the University at least one day before the day upon which the degrees are to be voted.

The term-bills are sent to the student at his college address unless the Bursar is requested in writing to send them elsewhere.

When a student's connection with the University is severed, all charges against him must be paid at once.

A deposit of \$50 is required of every new student who accepts a place in the Medical School; this sum to be applied on his first term-bill or to be forfeited if the student does not register.

Any student whose indebtedness to the University remains unpaid on the date fixed for payment is deprived of the privileges of the University until he is reinstated. Reinstatement is obtained only by consent of the Dean of the Department in which the student is enrolled, after payment of all indebtedness. A fee of \$10 is automatically added to all bills which are unpaid by the due date. Students will be held responsible for the payment of fees until they have notified the Dean, in writing, of their intention to withdraw from the School.

## DORMITORY

Vanderbilt Halls, the Medical School dormitory, has accommodations for 305 male and 20 female students. The majority of the rooms are designed for one occupant. Many of the rooms communicate directly with the adjacent room, and there are also a number of suites for two or more persons. The price of rooms range from \$200 to \$450 per person for the academic year. Application forms for rooms in Vanderbilt Hall will be sent to all new students approximately four months before registration day. The date on which they must be returned in order to be included in the drawing will be announced at that time. Students are per-

mitted to reengage their rooms for the following year by signing lease cards at the Dean's Office. The dormitory has squash courts and a gymnasium which are open to members of the teaching staff and students of the Medical School. In addition the School has tennis courts and an outside exercise field. There is a parking lot for a limited number of automobiles behind the hall which is owned by the School. No charge is made for this facility and the School assumes no responsibility for loss or damage to automobiles or other property left in the lot.

### DINING HALL

The dormitory contains a large dining hall which is available for all members of the medical area. First year students living in Vanderbilt Halls will be required to pay full board, \$600.00 for 21 meals a week throughout the academic year. Second year students living in Vanderbilt Halls will be required to pay full board for the first semester, \$300.00 for 21 meals a week for the term. During the second term, second year students may sign up by the week or pay for individual meals as they wish. Except as stated above, a weekly or an individual meal rate is available.

# BOND REQUIRED OF STUDENTS

On his entrance to the School each student is required to file with the Bursar a bond in the sum of \$500 as security for payment of University bills. The bond must be signed by two bondsmen, both of whom must be citizens of the United States, or by a surety company duly qualified to do business in Massachusetts.

No officer or student of the University will be accepted as a

No officer or student of the University will be accepted as a bondsman and in no case will more than one parent be accepted as a bondsman.

In lieu of the bond a student may deposit with the Bursar five hundred dollars in United States Treasury coupon bonds, or five hundred dollars in cash which will bear no interest.

### STUDENT HEALTH SERVICE

The Harvard Medical Center Health Service at the Peter Bent Brigham Hospital, 721 Huntington Avenue, supplies medical care to the students. The clinic is open daily except Saturday afternoons, Sundays, and holidays from 8.30 a.m. to 5:00 p.m.; office hours for the physicians are 8:30 to 10:00 a.m. and 1:00 to 2:00 p.m. However, one of the staff is available during the day by appointment and for emergencies. For emergency care at night and on holidays, the Emergency Service of the Peter Bent Brigham Hospital is open at all times and one of the staff of the clinic is available by telephone. A complete medical examination of each new student is required at the beginning of the school year. This is conducted by appointment shortly after school opens.

Medical students requiring hospitalization will ordinarily be hospitalized at the Peter Bent Brigham Hospital. Upon registration, each student receives a booklet which describes the medical services available from the Medical Center Health Service. Hospital insurance is available through the plan for wives and children of married students.

Evidence of having been satisfactorily vaccinated is required for entrance to Harvard University and a form for certification which must be filled out is sent to each student who is accepted for admission. Results of a chest film made within six months prior to registration must be reported.

Any illness necessitating absence from classes should be reported to the Health Service.

# FELLOWSHIPS AND SCHOLARSHIPS

## **FELLOWSHIPS**

The Fellowship Funds of the Harvard Medical School are, except where otherwise noted, administered by a Standing Committee of the Faculty. Applications for support from these funds should be sent to the Dean's Office.

EDWARD HICKLING BRADFORD (1918). Anonymous. To be used

for medical research or instruction separately or in connection with any other foundation, in such manner as may be prescribed.

JOHN WHITE BROWNE (1918). Mrs. Francis B. Greene. For a young man of unusual promise to pursue research investigation for one year at the Harvard Medical School or elsewhere.

Bullard (1891). William Story Bullard, in memory of three physicians "distinguished for their honorable personal character and their professional services in this community":

GEORGE CHEYNE SHATTUCK MEMORIAL

JOHN WARE MEMORIAL

CHARLES ELIOT WARE MEMORIAL

Any one or all of these fellowships may be paid to any student or member of the medical profession appointed to make such original investigations in Medical Science as will be most useful to the profession and to the community. The results of these investigations shall not, however, be published as a research performed under the grant of a Bullard Fellowship, unless the work shall have received the approval of the Committee.

Holders of the fellowships must do throughout the academic year the equivalent of at least ten hours' work a week and make a report thereon.

ARTHUR TRACY CABOT (1913). Dr. and Mrs. Frederick Cheever Shattuck. In memory of Arthur Tracy Cabot, A.B. 1872, M.D. 1876. For students of surgery. Ordinarily the incumbent may not engage in active practice, but is to devote himself to the advancement of surgery in the United States or elsewhere. Nomination to this fellowship is by preference to be made by the Moseley Professor of Surgery.

JAMES JACKSON CABOT (1906). Arthur T. Cabot, Samuel Cabot, and Guy C. Cabot. Income to be used to "aid and encourage practical work in scientific medicine."

Walter Bradford Cannon (1945). Mr. Joseph F. and Mrs. Clara Ford. A fellowship in Physiology.

Henry A. and Camillus Christian (1956). Henry A. Christian. To be appointed by the Hersey Professor of the Theory and Practice of Physic. The fellowship shall be held preferably by the same individual for a period of five years. The greater part of his time shall be devoted to medical investigation, preferably in the field of clinical medicine.

HAROLD C. ERNST MEMORIAL FUND (1938). Mrs. Ellen L. Ernst. A scholarship or fellowship in the Department of Bacteriology.

Charles Follen Folsom (1908). Founded by more than sixty persons in memory of Charles Follen Folsom, A.B. 1862, M.D. 1870. A Teaching Fellowship in Hygiene or in Mental and Nervous Diseases. For the present assigned to the Department of Neuropathology-Neurology.

Louis W. Gilbert (1943). S. Louise Gilbert. Income to be used for the study of chronic diseases.

Charles Dustin Hunking, M.D. (1948). Sarah S. H. Cheney, in memory of her brother, Charles Dustin Hunking, M.D., a member of the Class of 1871 of Harvard University and of the Class of 1876 of Harvard Medical School. To enable a graduate of Harvard Medical School, who is also a native of Haverhill, Mass., to do medical research.

Louis E. Kirstein (1937). Friends of Louis E. Kirstein. For the promotion of scientific medical education.

WILLIAM O. Moseley, Jr., Travelling Fellowships (1912). Mrs. William O. Moseley. For students who have attended the School for three or four years or, upon recommendation of the Administrative Board in each such case, men who have been two years as undergraduates in the School and who have subsequently for at least a year done, under members of the staff of this School, advanced work of such character and quality as to lead the Administrative Board to believe that they will be of unusual value in their profession. To enable them to continue the study of medicine in Europe. Either two or three fellowships will be awarded.

Francis Weld Peabody Memorial (1929). To be awarded on the recommendation of the Dean and full professors of Medicine in charge of the clinics of the Boston City Hospital, the Massachusetts General Hospital, and the Peter Bent Brigham Hospital, to properly qualified graduates of medical schools to enable them to devote further time to intensive clinical and laboratory studies.

JEFFREY RICHARDSON (1933). William Lambert Richardson, A.B. 1864, M.D. 1867. To be awarded each year to some deserving student, upon his graduation from the Harvard Medical School, who desires to continue his studies either here or abroad.

HENRY P. WALCOTT (1910). Dr. Frederick Cheever Shattuck. For a Fellow in Clinical Medicine appointed on nomination by the Jackson Professor of Clinical Medicine. The recipient shall not engage in private practice but must devote his time to teaching and clinical research.

WHITMAN (1933). Mrs. Bernard C. Whitman, in memory of her husband Bernard C. Whitman, A.B. 1846, and of her son Crosby C. Whitman, A.B. 1886. Available for a graduate of Harvard Medical School pursuing the study of medicine or surgery at the École de Médecine de Paris.

WILLIAM HUNTER WORKMAN (1925). William Hunter Workman, M.D. 1873. To enable one or more graduates of the Harvard Medical School to pursue postgraduate studies in medicine in this country or abroad. In exceptional cases, fourth year students will be eligible.

# SCHOLARSHIPS

## HARVARD MEDICAL SCHOOL NATIONAL SCHOLARSHIPS

In order to make it possible for young men of outstanding ability and promise to come to the Harvard Medical School, two or three Harvard Medical School National Scholarships will be offered to incoming members of the first year class. These scholarships will carry a stipend sufficiently large, if necessary, to meet all the stu-

dent's essential expenses. Successful applicants who maintain a high honor record at the Medical School will continue to hold these scholarships throughout the Medical School course.

The offer of these scholarships is made possible by gifts from Mr. Edward S. Harkness, Dr. Daniel F. Jones, and Dr. Franklin S. Newell. The donors expressed the hope that through these scholarships superior men who could otherwise not receive a medical education would be enabled to attend the Harvard Medical School. They also expressed the hope that some of these men might wish to return to their own communities to carry on the practice of medicine.

Direct application for these scholarships cannot be made since all accepted first year students are considered as candidates, the awards being made without reference to financial circumstances. The stipend will vary depending on the resources of the recipient.

### GENERAL SCHOLARSHIPS

The following scholarships are open to students who have been admitted to the School at the time of application. Approximately

\$65,000 is available annually from the general scholarship funds.
The Cheever, Gerry, Greene, and Haven Scholarships are awarded only to students of the first year class. The Hayden and Webster Scholarships may be so awarded. All the other scholarships are available to members of all classes.

Scholarships and gratuities are awarded to such men among those applying for and needing assistance as give evidence of hav-

ing done the best work in this School.

Information with regard to all forms of pecuniary aid may be obtained from the Dean's Office. Students requiring aid should visit the Dean's Office as soon as possible after matriculation to discuss their financial needs.

Aesculapian Club (1938). To be used for loans or scholarships.

VIVIAN B. ALLEN (1954). To provide scholarship aid for men who are unable to pay their own way for medical training.

EDWARD DANA BARBOUR FUND (1928). For promoting medical education in China, preference to students coming from Shanghai or its environs.

EDWARD M. BARRINGER FUND (1881). Edward M. Barringer. For the maintenance of two scholarships for students in the Harvard Medical School. Awarded to deserving students, preference being given to those of the fourth year class.

EDWARD M. BARRINGER No. 1

EDWARD M. BARRINGER No. 2

GORDON BARTLETT (1919). Mr. and Mrs. Donald Gordon, in memory of their nephew, Gordon Bartlett, a student at Dartmouth College who died of wounds at St. Mihiel while serving in the Seventeenth Field Artillery. Preference is given to graduates of Dartmouth College. This scholarship will ordinarily be divided between two men.

MATTHEW AND MARY E. BARTLETT (1916). Miss Fannie Bartlett, in memory of Matthew and Mary E. Bartlett. For the benefit of a worthy and meritorious student who is in need of financial assistance.

Lucius F. Billings (1900). Lucius F. Billings. May be divided between two or more students.

Dr. Robert Bonney Fund (1944). Robert Bonney, M.D. 1898. For the aid of needy and meritorious students.

HENRY FASSETT CASTLE (1941). William E. Castle, A.B. 1893, A.M. 1894, Ph.D. 1895, as a memorial to his son, Henry Fassett Castle, who died in November, 1919, at the age of 19, having completed the previous June the work of the first year in the Medical School.

DAVID WILLIAMS CHEEVER (1889). David Williams Cheever, A.B. 1852, M.D. 1858, LL.D. For a first year student after three months' study in the Medical School.

DAVID WILLIAMS CHEEVER #2 (1947). David Cheever, A.B. 1879, M.D. 1901. To be awarded at the beginning of the year to

a first year medical student in hope that after the stated probationary period he may be awarded the scholarship founded by David Williams Cheever, A.B. 1852, M.D. 1858.

ELEANOR DWIGHT CLARK (1938). For one or more scholarships of the type of the Harvard National Scholarships.

COTTING GIFT (1900). Benjamin E. Cotting, A.B. 1834, M.D. 1837. Awarded on the basis of pecuniary need, intellectual capacity, faithfulness and earnest endeavor.

Myron Denton (1956). Myron P. Denton, in memory of his father.

ORLANDO W. DOE (1893). Orlando Witherspoon Doe, A.B. 1865, M.D. 1869. To be given annually to a deserving student in the Medical department.

GEORGE RUSSELL EAGER (1936). Miss Mabel T. Eager, in memory of her father.

HENRY EHRLICH MEMORIAL (1927). Friends and family of Henry Ehrlich, M.D. 1886. To be used for the assistance of needy and worthy students regardless of creed or color.

RUSSELL DUNSON ELLIOTT (1950). Awarded annually to properly qualified applicants, preferably of Anglo-Saxon ancestry.

HORACE PUTNAM FARNHAM (1918). Mrs. Eliza Cary Farnham in memory of her husband, Dr. Horace Putnam Farnham, A.B. 1843. For the benefit of meritorious students in the Harvard Medical School.

REGINALD FITZ (1954). Scholarships for students in the Harvard Medical School.

Dr. E. Peabody Gerry (1943). The income to aid first year students.

CHARLOTTE GREENE (1925). Edwin Farnham Greene. For a first year student whose previous record indicates special promise.

Dr. C. Eugene Gunther (1933). Mrs. C. Eugene Gunther in

memory of her husband. To be used to maintain two scholarships for the benefit of deserving medical students.

GEORGE HAVEN (1913). George Haven, M.D. 1883. To be used annually for scholarships for students of the first year in the Medical School.

Lewis and Harriet Hayden (1894). Mrs. Harriet Hayden. For colored students. The income may be divided. If not awarded in the Medical School, the School of Public Health, or the School of Dental Medicine, it is open to colored students in any other department of the University.

WILLIAM HILTON (1897). Two scholarships annually in the Medical School.

WILLIAM OTIS JOHNSON (1911). Mrs. William O. Johnson, in memory of her husband, William Otis Johnson, A.B. 1845, M.D. 1848.

CLAUDIUS M. JONES (1893). Claudius Marcellus Jones, A.B. 1866, M.D. 1875.

ALFRED HOSMER LINDER (1895). Mrs. George Linder. For a student of sound principles and marked ability.

ARTHUR THEODORE LYMAN AND HENRY STURGIS GREW ME-MORIAL SCHOLARSHIP (1926). On March 19, 1951, it was voted by the Corporation . . . "to provide that such income shall be available, until further order of this board, for scholarships in the Medical School, the School of Dental Medicine and the School of Public Health; preference to be given to Chinese students, with the understanding that if none such apply successfully, the income may be used for scholarships for students from elsewhere in the Far East."

MEDICAL SCHOOL CLASS OF 1879 (1909). Established by the Class of 1879 as a loan fund and later converted to a scholarship.

James Ewing Mears, M.D. (1909). J. Ewing Mears. For a student throughout the full course of four years, subject to his scholastic standing and good conduct.

ERNEST OMAR NAY (1947). Ernest Omar Nay, M.D. 1919. For a medical student from the states of Indiana, Illinois or Ohio whose scholarship is above the average and whose financial resources are such that he cannot unaided acquire a medical education.

Joseph Pearson Oliver (1904). Patients of Joseph Pearson Oliver, M.D. 1871. To be awarded to a needy and deserving student of the Medical School.

JOHN ELIOT OVERLANDER (1947). John Eliot Overlander, M.D. 1909. To assist such needy medical students as may be deemed worthy of assistance by the proper authorities.

CHARLES B. PORTER (1897). William L. Chase.

FLAVIUS SEARLE (1921). Miss Mary L. Searle, in memory of her father, Dr. Flavius Searle. The stipend may be divided.

JOSEPH J. SILBERT (1937). For scholarship or loans to needy students.

ELEANOR B. AND CHANNING S. SIMMONS (1954). Scholarships for two needy students.

Francis Skinner (1905). Francis Skinner, Esq. To be used in small sums to meet the urgent needs of meritorious students in the payment of term-bills or other expenses.

Charles Pratt Strong (1894). Friends and patients of the late Charles Pratt Strong, A.B. 1876, M.D. 1881.

ISAAC SWEETSER (1892). Mrs. Anne M. Sweetser. To be "devoted to the aid of poor students of ability who would not otherwise be able to continue the studies necessary for their profession."

John Thomson Taylor (1899). Mrs. Frederic D. Philips, in memory of her brother, John Thomson Taylor. To be paid to some meritorious undergraduate of the Medical School without regard to his pecuniary circumstances.

Mary Thacher (1956). Mary Thacher. To be applied against the tuition of needy students preferably from first, Yarmouth,

Massachusetts, secondly from the Cape Cod region of Massachusetts, and thirdly from Massachusetts.

WALKER SCHOLARSHIPS (1922). Miss Leslie Walton Walker, four scholarships.

Dr. Charles Walker

HELEN L. WALKER

Anna G. Walker

LESLIE W. WALKER

ABRAHAM A. WATSON (1923). Miss Catherine E. Walker. For the benefit of students in the Medical School.

MAJOR HARRISON BRIGGS WEBSTER, U.S.A. MEMORIAL (1921). Gift of L. Florence Webster in memory of her son, Class of 1905, to sons of members of that class or to a needy student in the Medical School.

EDWARD WIGGLESWORTH (1897). The family of Edward Wigglesworth, A.B. 1861, M.D. 1865.

## SCHOOL OF DENTAL MEDICINE SCHOLARSHIPS

THE ALFORD FUND (1785). Mrs. Joanna Alford. To be used for scholarships for those students who are under low and indigent circumstances.

DWIGHT M. CLAPP (1926). Clara Josephine Clapp in memory of her husband, Dwight M. Clapp, D.M.D. 1882. For the education of a male student born in Massachusetts, preferably one who has a college education or training of a classical character.

THOMAS ALEXANDER FORSYTH (1929). Thomas Alexander Forsyth scholarship to two deserving men, awarded continuously until they have completed the course.

HARVARD DENTAL ALUMNI (1949). Selection of a candidate shall be based upon character, scholarship, and promise within the field of dentistry. The award may be offered as a scholarship

to an undergraduate student of the third or fourth year or as a fellowship for graduate work.

EUGENE HANES SMITH (1920). Alumni Association. To be awarded to a third or fourth year student who has been a student in regular standing during the first and second years.

PETER E. STRAUSS (1922). Emily R. M. Strauss. In memory of her husband.

FELLOWSHIPS AND SCHOLARSHIPS AVAILABLE IN OTHER DEPARTMENTS
OF THE UNIVERSITY AS WELL AS IN THE MEDICAL SCHOOL AND
SCHOOL OF DENTAL MEDICINE

Unless otherwise stated, applications should be made, before February 10, to the Deans of the Medical School and School of Dental Medicine.

EDWARD AUSTIN BEQUEST (1899). For fellowships or scholarships in any department of the University.

JASON S. BAILEY FUND (1952). Residuary bequest of Jason S. Bailey. For scholarships in any department of the University.

Frank B. Baird, Jr., Scholarship. Income assigned to Graduate School of Education.

ELLEN S. BATES FUND (1929). Residuary bequest of Ellen S. Bates. For scholarships to deserving students in any department of the University. To be awarded every third year, with the next award to be made in 1958.

BAXENDALE SCHOLARSHIP (1928). Bequest of Esther M. Baxendale. Preference: (1) descendants of Alan Bedford Hudson; (2) students of the name of Baxendale or Hudson; (3) students from Brockton, Mass., or Bourne, Mass. Birth certificates and genealogical record required of (1).

Bright Legacy (1880). Bequest of Jonathan Brown Bright. For descendants of Henry Bright, Jr., of Watertown, Mass., who bear the name of Bright, registered in any department of the

University. If no awards are made to preferential candidates, the income shall be assigned to the College Scholarship Committee. Birth certificate and genealogical record required to establish special claim.

Daniel A. Buckley Bequest (1905). Bequest of Daniel A. Buckley of Cambridge, Mass. For needy and worthy graduates of Latin, High and other public non-sectarian schools in Cambridge enrolled in any department of the University. Awards to undergraduates will be made by the College Scholarship Committee, 20 University Hall.

GODFREY L. CABOT, INC. SCHOLARSHIP FUND (1955). For scholarships and grants of "aid" to students enrolled in any department of the University. A son of an employee of Godfrey L. Cabot, Inc. or of its subsidiary and associated companies, who applies for aid or a scholarship, may be preferred in the awards from this fund.

VICTOR EMMANUEL CHAPMAN MEMORIAL FELLOWSHIP (1917). Several donors. In memory of Victor Emmanuel Chapman, A.B. 1913, killed in World War I. For a French youth (or youths) for study in any department of the University. Apply through the Institute of International Education, 1 East 67th Street, New York 21, New York, before February 1. Students already enrolled at Harvard, however, should apply through their Schools by the dates indicated in the instructions preceding these scholarship listings.

Joseph Hodges Choate Memorial Fellowship (1919). Gift of the Harvard Club of New York City in memory of Ambassador Joseph Hodges Choate, A.B. 1852. Awarded upon the nomination of the Vice-Chancellor of the University of Cambridge, England, to a British subject coming from that University to study in any department of Harvard University.

GEORGE CHASE CHRISTIAN MEMORIAL SCHOLARSHIPS (1936). Gift of Carolyn McKnight Christian in memory of her husband, George Chase Christian, A.B. 1895. To be awarded as National

Scholarships to residents of Minnesota, for study in any department of the University, preferably the graduate schools.

MARK D. CORY SCHOLARSHIP (1954). Residuary bequest of Mark D. Cory. To be awarded to a worthy graduate of the Gadsden High School, Gadsden, Alabama to be selected and designated by the faculty of said high school. Available for students in any department of the University. Administered by the College Scholarship Committee, 20 University Hall.

MYER DANA AND ETTA DANA SCHOLARSHIP FUND (1953). Gift of Etta (Mrs. Myer) Dana. To provide scholarships or beneficiary aid to needy and deserving students in the College, Medical School, or Law School.

Charles Downer Scholarship Fund (1927). Bequest of Charles Downer, A.B. 1889, LL.B. 1892. For students in any department of the University in the following order of preference:

- A. Students of "English or Anglo-Saxon stock" who bear the family surname of Downer by right of birth or inheritance, and not because of adoption, preference to be given to such students who are descendants of Joseph and Robert Downer, of Wiltshire, England, who came to America about 1650. Scholarship awards under this category will be sufficient to pay for tuition, books, food, room and other incidentals in any academic year.
- B. Descendants of members of the Harvard College Class of 1889 who are in need of assistance.
- C. Residents of the State of Vermont, preference to be given to those most worthy of assistance.
- D. Students worthy of assistance and of high scholarship, preference to be given to (1) Descendants of graduates of Harvard College, and (2) Those "of that old Anglo-Saxon stock which has gone forth from New England into all parts of the United States and has been the means of giving strength and stability and character to our government."

Or, any balance of income remaining after the award or scholar-

ships as specified in paragraphs A, B and C above may be used for fellowships for Harvard graduates of high scholarship and of rare and unusual ability who are pursuing special work either at Harvard or at any American or foreign university or school.

JOSEPH EVELETH BEQUEST (1896). For needy and worthy students in any department of the University.

Thomas Hooker Flint Memorial Scholarship (1957). Established by the friends and family of Thomas Hooker Flint, Harvard College Class of 1958, who died in 1957 in a climbing accident on Mount Madison, in the White Mountains, New Hampshire. The scholarship may be awarded either to students in Harvard College or Harvard Medical School, with preference for graduates of the Belmont Hill School. Thomas Flint was born in Concord, Mass., April 22, 1936, attended Belmont Hill School, and entered Harvard College in the Class of 1958 as an Honorary National Scholar, and hoped to attend Harvard Medical School. The scholarship is established in the conviction that those who benefit from it will fulfill the promise of his short life, as expressed in the closing words of a prayer known to have been Thomas Flint's guide in life: "Help us to make the life of our youth as lovely as the world in which it lives; the brotherliness of humanity equal to the beauty of nature."

GAGE SCHOLARSHIP (1948). Bequest of Homer Gage, A.B. 1882, M.D. 1887. In memory of Thomas H. Gage, M.D. 1852, Homer Gage, 1882, Thomas H. Gage, Jr., 1886, and Homer Gage, Jr., 1918. For students registered in any department of the University.

JEAN GAILLARD MEMORIAL FELLOWSHIP (1946). Established in memory of Jean Gaillard, a student of the Ecole Centrale des Arts et Manufactures in Paris, who served as an Aspirant in the French Air Forces, was arrested by the German Gestapo, and died in the German concentration camp at Ravensbrueck April 16, 1945, a victim of Nazi inhumanity. For a French youth for study in any department of Harvard University or of the Massa-

chusetts Institute of Technology. The incumbent from year to year is to be nominated by the Board of Directors of the Ecole Centrale des Arts et Manufactures in Paris.

John Tyler Hassam Memorial Scholarship (1941). Bequest of Eleanor Hassam in memory of her father, John Tyler Hassam, A.B. 1863. For students registered in any department of the University.

Lewis and Harriet Hayden Scholarship for Colored Students (1894). Residuary bequest of Mrs. Harriet Hayden. For needy and worthy colored students in the Medical School, School of Public Health and Dental School; or, if not awarded in these Schools, in any department of the University. Administered by the Medical School.

NATHAN HAYWARD MEMORIAL SCHOLARSHIP FUND (1956). Gift of Anna S. (Mrs. Nathan) Hayward in memory of her husband. For Nathan Hayward Scholarships or aid to students in any department of the University.

Charles W. Holtzer Fellowships (1929). Bequest of Charles W. Holtzer. For young men of German birth who have received their preliminary education in German institutions of learning, to study in any department of the University. Preference is given to students in Germany at the time of application. Students in Germany may apply either through the Deutscher Akademischer Austauschdienst, Nassestrasse 11, Bonn, or the Institute of International Education, 1 East 67th Street, New York 21, New York, before February 1. Students enrolled at Harvard should apply through their Schools by the dates indicated in the instruction preceding these scholarship listings. Documentary proof of German birth and education required.

EDWARD WILLIAM HOOPER MEMORIAL (1905). The gift of friends of Edward W. Hooper, A.B., 1859, LL.B. 1861. For one or more fellowships in any department of the University.

CHARLES LLOYD HUFF SCHOLARSHIP FUND (1949). Residuary bequest of Anna Elizabeth (Mrs. Charles Lloyd) Huff, in memory

of Charles Lloyd Huff, A.B. 1913. Income assigned to College Scholarship Committee, 20 University Hall.

SINCLAIR KENNEDY FUND (1948). Gift of Mrs. Rae B. Kennedy in memory of her husband, Sinclair Kennedy, A.B. 1897, LL.B. 1906. For grants to students enrolled in any of the graduate departments of the University for travel and residence outside the United States. "This fund to provide grants for travel is created in the belief that an opportunity to observe and to compare, to seek meanings and reasons, may enlarge the understanding of the traveller and, through him, be of general value." Not open to competition by undergraduates, including graduating seniors, in the College. Recommendations for Kennedy Fellowships are made on behalf of students by the Deans or Chairmen of the Departments in which the student is registered. In addition, at least two letters of recommendation from the student's instructors, and a somewhat detailed statement of purpose written by the candidate, must be submitted on his behalf. All material is then forwarded to the General Scholarship Committee Office, 35 Weld Hall, before February 1.

Frank Knox Memorial (1946). Gift of Annie Reed Knox in memory of her husband, Col. Frank Knox, LL.D. (Hon.) 1942, Secretary of the Navy, 1940–44. "It is my hope that this fund . . . will play a part in an integrated program of exchange fellowships throughout the world. The Frank Knox Memorial is established because of the firm belief of my dear husband, a conviction which I share, that cooperation between the British Commonwealth and the United States of America, based upon an informed and understanding contact of the peoples of these two great countries, is an essential to international peace." Candidates shall be selected on the basis of future promise of leadership, strength of character, keen mind, a balanced judgment and a devotion to the democratic ideal. At present two fellowships are awarded annually to:

1. A student coming from one of the following British Commonwealth countries: Australia (1959–60), United Kingdom

(1960–61), and in later years also to Union of South Africa, New Zealand, Canada and Newfoundland. Nominations of Australian students made by the Australian Vice-Chancellors' Committee, % University of Melbourne, Carlton, N.3, Victoria, Australia. Inquiries from Australian students should be addressed to the Secretary of the Committee before November 1, 1958. Nominations of United Kingdom students made by Committee of Vice-Chancellors & Principals of the Universities of the United Kingdom, 36 Gordon Square, London, W.C. 1, England. Inquiries from United Kingdom students should be addressed to the Secretary of the Committee before March 1, 1960.

2. A recent graduate of Harvard College, or a student who has completed at least one year of study in one of the Harvard graduate schools, for study in any one of the countries listed above. Graduating seniors should consult their Department Chairmen, House Masters or Senior Tutors in regard to the application procedure. Graduate students should consult their Deans or Department Chairmen. Application material is due by *March 1* in the Office of the Dean of the College, Room 4, University Hall. Selection among nominees for recommendation to the General Committee is made by an interviewing committee.

ARTHUR LEHMAN FUND (1936). Gift of Adele L. (Mrs. Arthur) Lehman and her daughters and sons-in-law, Mr. and Mrs. Richard J. Bernhard, Mr. and Mrs. Benjamin J. Buttenwieser and Mr. and Mrs. John L. Loeb, in memory of Arthur Lehman, A.B. 1894. For Arthur Lehman Fellowships to be awarded along the general lines of the Harvard National Scholarship Plan. For students of exceptional merit and promise in the graduate and professional schools only of the University, preference to be given to the following: Graduate School of Arts and Sciences, School of Education, Medical School, School of Design and School of Public Administration.

Horace Louis Leiter Memorial Scholarship (1955). Bequest

of Marietta D. Leiter in memory of her husband, Dr. Horace Louis Leiter, A.B. 1899. For deserving students in any department of the University.

Lincoln Scholarship (1876). Residuary bequest of Miss Levina Hoar. Preference for needy and worthy students from Lincoln, Mass. If there are no such applicants, the income is assigned to the College Scholarship Committee for award to undergraduates.

Charles R. Lowell and Anna L. Lowell Scholarship (1949). Residuary bequest of Anna L. (Mrs. Henry E.) Woodbury for the establishment of two scholarships, to be known as "The Charles R. Lowell and Anna L. Lowell Scholarship" and "The James J. Lowell and Anna L. Woodbury Scholarship" for "worthy, deserving and indigent young men who may be shown to be unable to pay their tuition." Available for award in any department of the University. Income assigned to the College Scholarship Committee.

James J. Lowell and Anna L. Woodbury Scholarship (1949). Residuary bequest of Anna L. (Mrs. Henry E.) Woodbury, see above. Income assigned to the College Scholarship Committee.

Frances E. Markoe Residuary Bequest (1944). Residuary bequest of Frances E. (Mrs. Harry) Markoe for the establishment of scholarships for students in any department of the University.

ALWIN M. PAPPENHEIMER '99 FUND (1957). Bequest of Beatrice L. (Mrs. Alwin M.) Pappenheimer, in memory of her husband; "the income therefrom to be used for any kind of financial assistance, whether for tuition, books, necessary maintenance and support or otherwise to graduate students in the College or in any graduate school of the University, suggesting, but not binding the President and Fellows of Harvard College hereby, that the said income be preferably used for the benefit of such graduate students in the fields of medicine or music." The income is allocated equally between the Medical School and Graduate School of Arts & Sciences. Awards made by the scholarship committees of those schools.

John Parker Bequest (1873). Bequest of John Parker for fellowships to further the scientific education either abroad or in the United States (including Harvard University) of exceptionally talented graduate students devoting themselves to the study of one of the natural sciences. Not open to competition by undergraduates, including graduating seniors, in the College. Candidates from the following areas are considered: Divisions of Engineering and Applied Physics (if candidate's field is concerned with a natural science), Geological Sciences and Medical Sciences; Departments of Astronomy, Biology, Chemistry and Physics. Recommendations for Parker Fellowships are made on behalf of students by the Chairmen of the Divisions and Departments listed above. In addition, at least two letters of recommendation from the student's instructors, and a somewhat detailed statement of purpose written by the candidate, must be submitted on his behalf. All material is then forwarded to the General Scholarship Committee Office, 35 Weld Hall, before February 1.

FREDERICK E. PARLIN FUND (1928). Bequest of Albert Norton Parlin. For needy and worthy students in any department of the University, preference to be given to natives of Malden or Everett, Mass. Evidence that applicant is a native of either Malden or Everett should accompany application of student seeking to establish preferential claim.

WILLIAM PENNOYER BEQUEST (1670). Bequest of William Pennoyer of England, for two fellows and two scholars; one preferably to be a descendant of Robert Pennoyer (a brother of William) and the other . . . [from] . . . New Haven [Colony]. Preference to to be given to undergraduate descendants. Pennoyer descendants in the graduate schools may apply for the Pennoyer Scholarship by filing such application directly with the College Scholarship Committee, 20 University Hall, before February 1. Certified genealogical records required to establish claim.

ARISTIDES EVANGELUS PHOUTRIDES MEMORIAL (1925). Gift of friends of Aristides Evangelus Phoutrides, A.B. 1911, Ph.D. 1915,

to provide a scholarship in his memory for a student of Greek birth or of Greek parentage in any department of the University. Documentary evidence of Greek birth or parentage required of applicants.

Princeton Fellowship (1910). Gift of Cleveland H. Dodge. To be awarded to a graduate of Princeton University, for his first year of study only, in one of the graduate departments of Harvard University. Applications should be made to the Dean of the Graduate School of Princeton University before January 20.

LEON W. REDPATH SCHOLARSHIP (1938). Bequest of Eliza Allen (Mrs. Ellis W.) Redpath in memory of her son Leon W. Redpath, A.B. 1898. For deserving students from the State of Ohio, registered in any department of the University, with preference to residents of Stark and Tuscarawas Counties.

FRANKLIN REYNOLDS FUND (1925). Residuary bequest of John F. Reynolds. For students in any department of Harvard University and Radcliffe College who are natives of Marblehead, Mass. Application should be accompanied by evidence that applicant is a native of Marblehead.

James A. Rumrill Scholarships (1909). Gift of Anna Chapin (Mrs. James A.) Rumrill in memory of her husband James Augustus Rumrill, A.B. 1859, to establish three scholarships, two of which are available to graduates of secondary schools in Virginia, North and South Carolina, Florida, Georgia, Tennessee and Kentucky, for their *first* year of residence as undergraduates in Harvard College. The third scholarship is for a graduate of a college or university in any of the above-named states for study in his *first* year of residence in any graduate department of Harvard University. These scholarships are not renewable. In the absence of properly qualified candidates from the above-named states, the scholarships may be thrown into general competition, as two undergraduate scholarships and one graduate scholarship. Entering students in the College apply to the College Scholarship Committee, Room 20, University Hall; entering students in the

graduate departments apply through the Deans' Offices of their Schools.

Peter Brooks Saltonstall, '43 Memorial (1947). Gift of the family of Peter Brooks Saltonstall, 1943, who was killed in action on the Island of Guam on August 13, 1944. Peter B. Saltonstall was the son of Leverett Saltonstall, A.B. 1914, LL.B. 1917, United States Senator from Massachusetts and formerly Governor of Massachusetts. To further the education, the health and welfare of the peoples inhabiting the Hawaiian Islands and those islands west of Hawaii, including New Zealand, the Fiji Islands and Australia and also Japan, South Korea, Hong Kong, Formosa, the Philippine Islands, Vietnam, the East Indies, Indonesian Islands, Sumatra and Thailand. The first preference is that the income of this fund be used for scholarships or fellowships to assist worthy students from the above-named Pacific regions to gain a better education at Harvard University. The stipend shall be set to supplement the holder's income sufficiently to defray all his basic expenses of tuition, board and room, and in certain instances some travel allowance may be included. Students may apply directly to Harvard or through the Institute of International Education, 1 East 67th Street, New York 21, New York, before February 1. Students already enrolled at Harvard should apply through their Schools.

In the event that no suitable candidate for the scholarship appears, the unexpended income and its accumulation shall be available for the support of research to better the living conditions or the general well-being of the peoples in the Pacific region described above, such research grants to be made by vote of the Corporation on the recommendation of the Dean of the Faculty of Arts and Sciences.

Ernest Frederick Slater Scholarship (1955). Bequest of Ernest F. Slater. The income to be awarded as scholarships in any department of the University to deserving (financially or otherwise) young white men who are residents of (a) the City of Orangeburg, South Carolina; (b) the State of South Carolina;

preference to be given to descendants by birth or adoption of Edward Frederick Slater, father of the donor, regardless of their residence. Not open to students in their first year at the University.

Charles H. Smith Bequest (1947). Residuary bequest of Charles H. Smith. For awards to students in any department of the University according to the following order of preference:

- 1. a. Graduates of public high schools in Providence, Rhode Island, who are of scholarship rank.
  - b. Graduates of public high schools in Providence, Rhode Island, who are below scholarship rank but who are considered eligible for financial aid.
- 2. Graduates of other (non-public) secondary schools in Providence, Rhode Island, who are of scholarship rank.
- 3. Any residents of Rhode Island not indicated above who are of scholarship rank.
- 4. Non-Rhode Island residents of high scholarship rank.

WILLIAM STOUGHTON BEQUEST (1701). Bequest of Lieutenant Governor William Stoughton, A.B. 1650. For awards to students in any department of the University according to the following order of preference: (a) Residents of Dorchester or Mattapan, Mass.; (b) Residents of Milton, Mass.; (c) Any needy and deserving students.

JOHN E. THAYER SCHOLARSHIPS (1857). Bequest of John E. Thayer, the income to be paid "to the ten most meritorious scholars in Harvard University in Cambridge every year . . . the income shall only be paid to such meritorious scholars as who may actually need the same."

Augustus Clifford Tower Fellowship Fund (1927). Gift of Louise G. (Mrs. Augustus Clifford) Tower for two fellowships to be awarded annually to:

1. A graduate of Harvard College for study in a French university, preference to be given to a student of Anglo-Saxon descent. Graduating seniors should consult their Department

Chairmen, House Masters or Senior Tutors in regard to the application procedure. Graduate students should consult their Deans or Department Chairmen. Application material is due by March 1 in the Office of the Dean of the College, Room 4, University Hall. Nomination, on the basis of application material and interview, is made by a special selection committee to the Committee on General Scholarships.

2. A French student for study in any graduate department of Harvard University. French students should apply through the Directeur, École Normale Supérieure, 45 rue d'Ulm, Paris Ve, France, early in January.

In addition to the above fellowships, a sum from the Tower Fund is set aside annually for a travel grant to a graduate of Harvard College who is nominated by a special interviewing committee to attend the Ecole Normale Supérieure in Paris, on a fellowship provided by the French Government. Candidates should be United States citizens. For application procedure see paragraph 1 above.

University General Scholarship Fund (1951). Established by the President and Fellows of Harvard College. For scholarships to students in any School or department of Harvard University.

THOMAS E. UPHAM CLASS OF 1868 FUND (1939). Bequest of Marcella B. Upham. May be granted annually to worthy graduates of Harvard College in any department of the University who are "preparing to serve our country in public offices of trust and responsibility in the gift of the people, students of American parentage descended from the early settlers to be chosen in preference to others, provided they are equally worthy of assistance."

Anna Vaughn Foundation (1935). Residuary bequest of John Vaughn, A.B. 1879. For "meritorious students of Harvard University who are pursuing studies in any biological science."

SARAH L. VIEHMANN SCHOLARSHIP (1936). Gift of Henry Bluestone, A.B. 1906, in memory of his mother, Sarah L. Viehmann. For deserving students in the College or graduate departments of the University.

Jens Aubrey Westengard. "The income is to be applied . . . to the further education of students of promise and standing in any department of the University by providing them with facilities for further education in Europe, Britain, or South America, by travel or study, or to the further education of students of promise and standing in any of those countries, by providing them with facilities for further education by travel and study in this country, preferably by study in some department of Harvard University." Students enrolled in, or expecting to enroll in, the Law School should ordinarily apply for the Jens Iverson Westengard Fund administered by that School.

1902 WORLD WAR MEMORIAL SCHOLARSHIP (1923). Gift of the Class of 1902 in memory of their classmates, André Chéronnet-Champollion, Edward Ball Cole and Elbert Walker Shirk, and to be awarded by preference to: (1) deserving sons of 1902 men killed in World War I; (2) deserving descendants of members of the Class of 1902. Open to students in any department of the University, with preference to undergraduates. If no awards are made to preferential candidates, the income shall be assigned to the College Scholarship Committee.

JEFFRIES WYMAN SCHOLARSHIPS (1924). Bequest of Mary Wyman Davis in the name of Susan Wyman and Mary Wyman Davis. For one or more students in any graduate department of the University "who may have given promise of success in some branch of Biological Research," preference to be given to students of anatomy. Nominations are made before *March 1* to the Committee on General Scholarships by a committee consisting of the Hersey Professor of Anatomy, the James Stillman Professor of Comparative Anatomy and the Director of the Museum of Comparative Zoölogy.

In addition to General Scholarships, there are available for the assistance of students the following Beneficiary and Loan Funds:

### BENEFICIARY FUNDS

CHARLES WILLIAM ELIOT FUND (1926). Established by the alumni in honor of Charles William Eliot on the occasion of Mr. Eliot's resignation as President and in recognition of his forty years of service. The income is to be divided between (a) grants of aid to descendants in the direct line of Mr. Eliot who need financial assistance and who are enrolled in any department of the University or in Radcliffe College, and (b) the support of instruction and research in Landscape Architecture.

Calvin and Lucy Ellis Aid (1899). Bequest of Calvin Ellis, A.B. 1846, M.D. 1849, supplemented by a residuary bequest under the will of his sister, Miss Lucy Ellis. To pay the fees of tuition and instruction, the cost of text-books, room-rent and reasonable board, of such descendants of David Ellis and Beulah Newell, formerly of Dedham, Mass. and John Ellis and Hannah Ellis, formerly of Walpole, Mass., as may be students in any department of Harvard University. Birth certificate and proof of descent from Ellis family required.

Harrison-Darling-Jenks Memorial Fund (1935). Bequest of Miss Laura Darling Jenks. For aiding students in attaining an education at Harvard University. Income assigned to College Scholarship Committee.

# LOAN FUNDS

The following Loan Funds are to be used for students in any department of the University. Students apply through their own Deans. Loans are made according to the terms ordinarily applied by the individual Schools. Applications may be obtained from the several Deans' Offices or from the General Scholarship Office, 35 Weld Hall.

JOHN W. APPEL LOAN FUND (1919). Restricted to descendants of John W. Appel of Lancaster, Pennsylvania, or their appointees.

Frank Gaylord Cook Loan Fund (1951).

THE HARVARD CLUB OF WASHINGTON, D.C., LOAN FUND (1957). Preference for students resident in the Washington, D.C. area.

New Century Club of Boston Loan Fund (1926). Preferably for men pursuing courses of study in Hebraic literature, culture and philosophy.

Nelson Robinson, Jr. Loan Fund (1941). James G. Rodger Loan Fund (1883).

WILLIAMS FUND (1942).

### **PRIZES**

# MEDICAL SCHOOL

ISAAC ADLER (1934). Frida Adler. To be awarded once in three years for the best piece of original research within that period in the United States or Canada on any subject within the medical or allied sciences.

BOYLSTON FUND FOR MEDICAL PRIZES (1803). Dr. Ward Nicholas Boylston. A prize or prizes not to exceed \$100 annually. The medical, anatomical, physiological or chemical subject of the thesis to be determined by a Committee.

HENRY ASBURY CHRISTIAN (1937). Dr. Samuel A. Levine. To be awarded annually on or about the seventeenth of February, which is Dr. Christian's birthday, to the student in the Fourth Year Class who has displayed diligence and notable scholarship in his studies and offers promise for the future.

JAMES TOLBERT SHIPLEY (1952). Harriet S. Parker. To be used as a prize for some problem in research by a medical student, to be designated as the James Tolbert Shipley Prize in Medicine. The Dean to designate the award and the research to be conducted.

# SCHOOL OF DENTAL MEDICINE

HARVARD DENTAL ALUMNI MEDALS (1953). The Harvard Dental Alumni Association awards its gold and silver medals annually for all-around scholastic excellence.

HARVARD ODONTOLOGICAL SOCIETY (1949). The Harvard Odontological Society each year presents a Certificate of Merit to the best Senior Seminar Essayist of that year. This senior is selected by the Awards Committee of the School of Dental Medicine.

DR. GRACE MILLIKEN (1950). An award given annually when practicable, but at least once in three years, for an outstanding essay on the general subject of dental health.

### LOAN FUNDS

# Apply to Assistant Dean for Student Affairs

Funds are available in the Medical School for student loans.

In case of unforeseen emergency, loans may be made at any time. Loans are usually made to meet term bills and cash is provided rarely. Short term loans, for a period of less than six months, are available under special circumstances.

Ordinarily, loans are made at an interest rate of 1% per year, chargeable on the first of July and continuing at this rate until the July 1st subsequent to the completion of three years following a borrower's graduation from the School. Thereafter, interest at the rate of  $4\frac{1}{2}\%$  per year is charged annually on July 1st on outstanding loans.

In cases where the student borrower, for any reason, leaves the School prior to graduation, interest at the rate of 1% will be charged from the date of the loan until the date of separation from the School, and interest at the rate of  $4\frac{1}{2}$ % will be charged thereafter.

Notes are payable at any time but become due on July 1st five years after graduation.

# MEDICAL SCHOOL

Frank W. and Carl S. Adams Memorial Loan Fund (1955). Established by the Charles E. and Caroline J. Adams Trust as a revolving loan fund.

DAVID L. EDSALL REVOLVING LOAN FUND (1928). Dr. Frederick

C. Shattuck established this fund by gift of \$100,000 to be used as a revolving loan fund.

CHARLES WILLIAM ELIOT LOAN FUND (1924). Given anonymously in honor of President Eliot. Principal and interest to be used for loans to students in the Medical School.

GEORGE B. and LOUISE KERPER FUND (1956). Established by Edmund Kerper as a revolving loan fund in memory of George B. and Louise Kerper.

HARVARD WAR LOAN (1920). HARRIET P. KEITH LOAN (1921). FRANCIS I. PROCTOR AID FUND (1942). Harvard Medical School Loan (1954).

# SCHOOL OF DENTAL MEDICINE

THE CHRISTIAN SOLDIER FUND (1925). Established by Miss Caroline F. Anderson for promising dental students. The loan carries no interest but the recipient must sign a note obligating him to repay the loan not later than five years from the date of the note.

DENTAL ALUMNI LOAN FUND (1927). Established and maintained by the Dental Alumni Association for financial aid to worthy students.

LUCINDA DAVIS FERNALD FUND (1936). A small fund, the gift of Adelbert Fernald, D.M.D. 1896, to be loaned to deserving New England-born students of good character.

ROBERT T. MOFFATT FUND (1925). A small fund from various contributors in memory of Robert T. Moffatt, D.M.D. 1895, for the benefit of needy and deserving students.

School of Dental Medicine Revolving Loan Fund (1952). Recognizing the need for student loan money in the School, the President and Fellows of Harvard College authorized an appropriation to establish this fund.

School of Dental Medicine Loan Fund (1953). An appropriation from the School's funds to establish additional loan money for needy students.

### **LECTURESHIPS**

The Edward K. Dunham Lectures for the promotion of the medical sciences have been given annually since 1923 by eminent investigators and teachers in one of the branches of the medical sciences or of the basic sciences which contribute toward the advance of medical science in the broadest sense. The lectures are open to the Faculty and students of the Harvard Medical School and College and all other interested professional persons. The lectures are given under the fund established for that purpose by Mary Dows Dunham in memory of her husband, Dr. Edward K. Dunham.

The George W: Gay Lectures upon Medical Ethics are given annually at the Harvard Medical School. The fund for the establishment of these lectures was given in 1917 by Dr. George W. Gay.

The Alpha Omega Alpha Lecturer is to be nominated each year by the Alpha Omega Alpha Society. The honorarium and expenses of the lectureship to be supported from the fund established by the Society in 1952.

The Hanns Sachs Lectures in the field of Freudian psychoanalysis are supported by a gift in memory of Dr. Sachs. One or

more may be given in any year.

The Dr. Andrew Yeomans Lectureship Fund has been established by members of the Class of 1934 and the Class of 1935 and friends in memory of Dr. Yeomans. Lectures are to be given annually and the lecturer will be chosen from young clinicians in the fields of clinical research by a committee named by the donors.

# THE CANCER COMMISSION OF HARVARD UNIVERSITY

Under the will of the late Mrs. Caroline Brewer Croft a sum of money was received in 1899 for the investigation of the cause and treatment of cancer. Since that time other sums have been

contributed for cancer research and the Cancer Commission of Harvard University has been organized.

The Commission supports the Huntington Hospital beds, outpatient department, and cancer research laboratories at the Massachusetts General Hospital. It makes grants-in-aid to various departments of the University carrying on investigation on the cancer problems, and provides a service for pathological diagnosis of tumor tissue for the State of Massachusetts. This service was transferred in 1951 from the buildings of the Harvard Medical School to the Cancer Research Institute of the New England Deaconess Hospital. This service is carried on in part in a special laboratory at the Lemuel Shattuck Hospital, in part in laboratories at the Cancer Research Institute of the New England Deaconess Hospital.

The functions of the Cancer Commission are exercised by the Committee on Research and Development which is made up of the following members: Nathan Marsh Pusey, Chairman; George Packer Berry, McGeorge Bundy, Roy Orval Greep, Edward Reynolds, James Robbins Reynolds, John Crayton Snyder, Henry Coe Meadow, Executive Secretary.

# RESEARCH FUNDS

Application for support of investigations falling within the scope of any of the following research funds should be sent to the Dean.

# REAR ADMIRAL W. L. CAPPS FUND

In 1949 a bequest was received from Edna Ward Capps to be known as the Rear Admiral W. L. Capps Fund, the income from which, under certain circumstances, to be used broadly for the cure and treatment of persons afflicted with diabetes. George W. Thorn, M.D., is Chairman of the Committee administering the income from this fund.

### PROCTOR FUND

A bequest of fifty thousand dollars by Ellen Osborne Proctor, for the purpose of promoting the study of chronic diseases, subsequently has been increased by an additional fifty thousand dollars from another member of the Proctor family. The income of this fund is to be devoted to investigations into the nature and treatment of chronic diseases and the care of persons afflicted with these diseases while in hospitals for such investigations. Arthur T. Hertig, M.D., is Chairman of the Committee administering the income from this fund.

### WILLIAM W. WELLINGTON FUND

In 1925 a bequest was received from William H. Wellington to establish the "William W. Wellington Memorial Research Fund." The income of this fund is to be applied for research concerning the etiology and therapeutics of the diseases of man. Arthur T. Hertig, M.D., is Chairman of the Committee administering the income from this fund.

# COURSES FOR GRADUATES

The object of this department of the Medical School is to offer to graduates in Medicine opportunities to continue their studies in a thorough and scientific manner.

For information concerning courses offered, the Catalogue of Courses for Graduates should be consulted.

Facilities at the Harvard Medical School and the abundant clinical opportunities in the various hospitals are available for graduate instruction. Eugene C. Eppinger, M.D., Assistant Dean, is in charge.

# SCHOOL OF PUBLIC HEALTH

The School of Public Health is one of the graduate schools of the University. Instruction and research opportunities are available in the several disciplines which underlie the protection of

health and the investigation and control of diseases in communities. Some of these disciplines cut across fields in the medical, physical, and social sciences, and include such entities as biostatistics, epidemiology, public health practice, environmental hygiene, and sanitary engineering. Other significant aspects of public health are represented by departments of microbiology, nutrition, tropical health, and maternal and child health.

Much of the teaching and research activity of the School is concerned with international health problems and the preparation

of people for work in this field.

Students enrolled in the Medical School may take courses at the School of Public Health with the approval of the Head of the Department concerned. For further information, apply to the Secretary of the Committee on Admissions and Degrees at 55 Shattuck Street.

# OPPORTUNITIES FOR RESEARCH

The laboratories of the Medical School and its associated hospitals provide exceptional opportunities for each medical student to participate in a research program in the field of his special interest. The wide variety of investigations underway in basic and clinical sciences assures each student of the facilities to learn special techniques and to pursue an investigation of his choice.

Each medical student is encouraged to devote some of the free

Each medical student is encouraged to devote some of the free time during the school year and the summer months to a research program. Exceptional students may be permitted to withdraw from medical school for a year to devote full time to research. Any student in good academic standing and who has shown promise in research may be granted the privilege of devoting up to six months of his fourth scholastic year to research under the Tutorial System in place of certain of the clinical courses usually required. A limited number of fellowships are available for summer and part-time research.

Any student interested in undertaking research is urged to discuss his program with the members of the Tutorial Committee

(see page 84), with the Office of the Dean, or with any member of the Faculty.

# THE UNDERGRADUATE ASSEMBLY

The Undergraduate Assembly, held late in the spring of each year under student auspices, provides an opportunity for students from all classes to present formally the results of their investigations to the students and Faculty of the Medical School. The Soma Weiss Award is made at this meeting.

# DIVISION OF STUDIES TOTAL NUMBER OF HOURS FOR EACH SUBJECT

FOURTH YEAR	Medicine 288 37 Surgery 288 39 Obstetrics 144 44 Pediatrics 144 32 Psychiatry 144 33 27 40 40 88 68 68 68
THIRD YEAR	Medicine Dermatology Psychiatry Ophthalmology Surgery Gynecology . C. U. Surgery Laryngology and Otology Orthopedic Surgery Surgery Pediatrics Pediatrics Preventive Medicine Legal Medicine
SECOND YEAR	Bacteriology 169 Pathology 331 (including Parasitology and Neuropathology) Pharmacology . 146 Pathologic Physiology * . 302 Growth and Development: Biostatistics . 18 Introduction to Psychopathology 24 Genetics 24 Genetics 24 Genetics 24 Obstetrics and Gynecology 4
FIRST YEAR	Anatomy

<sup>\*</sup> A multidepartmental integrated course which includes Case Taking (Medicine and Surgery) and Laboratory Diagnosis.

# **ANNOUNCEMENT OF COURSES \***

The "Announcement of Courses" comprises a description of the four years in Medical School, followed by a statement of the general plan of instruction offered by each Department. There is also a résumé of the elective and voluntary courses.

# GENERAL PLAN OF THE FIRST TWO YEARS

In general, during the first semester of each of the first two years, individual departments introduce selected material characteristic of their particular disciplines. In the second semester of each year, the departments collaborate in the presentation of a

unified approach to various problems of human biology.

In the first year, the first semester is devoted to a study of gross anatomy, an introduction to histology, and to the fundamentals of physiology and biochemistry. During the second semester, the anatomy (macro- and micro-), physiology and biochemistry relevant to studies of the body fluids, respiration, the liver and the kidney, and the nervous, gastro-intestinal and endocrine systems is presented in an inter-departmental framework. A course entitled "Growth and Development," covering both somatic and psychic aspects is presented throughout the year (see below). A diagrammatic summary of these arrangements is presented on page 176.

In the first semester of the second year, the Departments of Bacteriology, Pathology and Pharmacology offer courses in their respective disciplines. A number of correlated interdepartmental exercises are also included. The last portion of the semester is devoted to chemotherapy taught jointly by the Departments

of Bacteriology and Pharmacology.

During the second semester a correlated program in pathologic physiology is given. Mechanisms of disease are presented in a unified course by members of the Departments of Gynecology,

<sup>\*</sup> Special pamphlets are issued describing the opportunities for elective and voluntary work and outlining the conditions under which such work may be undertaken.

Medicine, Neurology, Obstetrics, Pathology, Pediatrics, Pharmacology, Preventive Medicine, Psychiatry, Radiology, Surgery, and Tropical Public Health. In addition, practical instruction in the taking of case histories and physical examinations is given on the wards and out-patient departments of the hospitals at which there are Harvard teaching units. Aspects of "Growth and Development" are again discussed throughout the year (see below). A diagrammatic summary of the arrangements for the second year is presented on page 189.

The course entitled "Growth and Development" embraces a series of lectures, laboratories and clinics in a variety of subjects, with the objects of offering further integration of the material of the first two years, and providing a smooth transition into the third and fourth year courses. It is concerned with the whole individual in his setting, with emphasis on both physical and psychological growth. In the first year, discussions are in general centered about the normal individual, and topics such as embryology, genetics, and the fundamentals of normal behavior are presented. A series of clinics relates the material of the course in the first year to problems of human development and variation. During the second year, in addition to an introduction to the evaluation of data by biostatistical methods, a series of lectures develop further concepts of individual psychologic functioning. Emphasis now shifts to the nature and genesis of abnormal psychological mechanisms which result from both social and physical factors and are manifested in symptoms and behavioral disturbances. Again consistent with the trend in the second year, the clinics deal with the demonstration of abnormal physiological mechanisms which affect the function of the various organ systems.

# GENERAL PLAN OF THE THIRD AND FOURTH YEARS

The instruction in the third and fourth years is carried on at the teaching hospitals affiliated with the Medical School. It is designed to teach the student to apply the principles of normal

and abnormal human biology, acquired in the first two years, to the diagnosis and treatment of disease.

In the third year the teaching is by lectures, clinical demonstrations and practical work with patients. The practical instruction takes place in small groups on the wards or in the outpatient departments of the hospitals. Courses are required in Dermatology, Genito-urinary Surgery, Gynecology, Legal Medicine, Medicine, Neurology, Obstetrics, Ophthalmology, Otology and Laryngology, Orthopedic Surgery, Pediatrics, Preventive Medicine, Psychiatry, and Surgery.

In the fourth year the student continues his broad study of disease and begins to assume some responsibility for the care of patients. This is accomplished by service as a clinical clerk on the hospital wards and as an assistant in the outpatient clinics. Eight months of work is required: two months each of Medicine and Surgery; one month each of Obstetrics, Pediatrics, and Psychiatry; and at least one month of an elective course. In addition, students may elect courses for one, two, or three additional months by working during the summer between the third and fourth years.

# ELECTIVE AND VOLUNTARY COURSES

In addition to the requirement of one elective course in the fourth year, an opportunity for voluntary work is offered to first, second, and third year students on free afternoons, and to fourth year students during the additional months mentioned above. It is believed that students will welcome a chance to keep in touch with the most recent developments in the fundamental sciences; that an interest in certain fundamental subjects will have been aroused by their clinical work; or that they may feel the desire for additional exploration in some field. Students are not required to take this work. It is entirely a voluntary matter, and no credit is given.

There are also opportunities for association with voluntary groups interested in studying the economic, social and historical aspects of medicine.

# THE TUTORIAL PROGRAM AND STUDENT RESEARCH

The Tutorial Program was established in 1923 to foster student interest and participation in research. In 1957 it was expanded, in conjunction with the revised curriculum in the first two years, to provide each entering student with a tutor. Some twenty-five Tutors in Medical Sciences were appointed to enable first-year students to meet informally in groups of five with a tutor. These weekly meetings are intended to assist the student in organizing and correlating his knowledge and to point out the implications and applications of the knowledge of basic science gained in the formal courses to clinical medicine and to research. The proper design of experiments and the interpretation of data are considered. These are not intended to be review sessions or to prepare students for examinations in the formal courses, but to develop better understanding of the medical sciences as a whole.

The expanded Tutorial System provides an opportunity for each student to become well acquainted with some member of the Faculty to whom he may turn for advice in planning his medical career and in other matters.

The Tutorial Program of the second, third and fourth years is under the guidance of the tutors in Medicine, Surgery and the Preclinical Sciences. Seminars and symposia have been organized by the Tutors in the Preclinical Sciences, Medicine and Surgery, to aid the second, third, and fourth year students in deciding on a field of interest. The tutors give individual help to students in formulating a problem for original research and in being placed with the member of the Faculty best suited to guide this research. Students may devote free time during the school year and the summer months to this research problem. Fourth year students who have shown promise in extracurricular research may request the privilege of replacing certain clinical courses with four to six months completely free for research in any of the basic sciences or in any of the clinical divisions. Application for this privilege must be made before March 12 of the

student's third year. A few students are given the opportunity to withdraw from medical school for a year to pursue a research problem. (See section on "Opportunities for Research" page 78.)

Abbreviations used in the following pages, and in the tabular views:					
B.C.H.	= Boston City Hospital.	M.M.H.C.	= Massachusetts Mental		
B.I.H.	= Beth Israel Hospital.		Health Center		
B.L.I.H.	= Boston Lying-in Hos- pital.	Mt.A.H.	= Mount Auburn Hospital.		
C.M.C.	= Children's Medical Center.	N.E.C.H.	= New England Center Hospital.		
F.H.W.	= Free Hospital for Women.	N.E.D.H.	= New Éngland Dea- coness Hospital.		
H.M.S.	= Harvard Medical School.	P.B.B.H.	= Peter Bent Brigham Hospital.		
н.м.н.	= Haynes Memorial Hospital.	P.L.I.H.	= Providence Lying-in Hospital.		
L.I.H.	= Long İsland Hospital.	S.D.M.	= School of Dental		
McL.H.	= McLean Hospital.		Medicine.		
	= Massachusetts Eye and Ear Infirmary.	S.P.H.	= School of Public Health.		
M.G.H.	= Massachusetts General Hospital.	W.R.V.A.H	.= West Roxbury Veter- ans' Administration		
M.I.T.			Hospital.		

# Anatomy

ROY O. GREEP, Ph.D., A.M. (hon.), Professor of Anatomy in the School of Dental Medicine and Dean of the School of Dental Medicine, and Acting Head of the Department of Anatomy.

EDWARD A. EDWARDS, M.D., Associate Clinical Professor of Anatomy.

Franklin F. Snyder, M.D., A.M. (hon.), Assistant Professor of Anatomy and Obstetrics.

RUSSELL J. BARRNETT, M.D., Assistant Professor of Anatomy.

GEORGE E. ERIKSON, Ph.D., Assistant Professor of Anatomy. (Absent: January 1 to June 30, 1959.)

JESSE F. Scott, M.D., Assistant Professor of Anatomy.

LEON P. Weiss, M.D., Assistant Professor of Anatomy.

AARON J. LADMAN, Ph.D., Associate in Anatomy.

HELEN A. PADYKULA, Ph.D., Associate in Anatomy.

CHARLES P. LYMAN, Ph.D., Research Associate in Anatomy.

WILLARD D. ROTH, Ph.D., Instructor in Anatomy.

John F. Schmedtje, Ph.D., Instructor in Anatomy (appointment expired August 31, 1958).

ALBERT F. PARLOW, Ph.D., Research Fellow in Anatomy.

JOLANE P. B. SOLOMON, Ph.D., Research Fellow in Anatomy.

Abdollah Gashgai, M.D., Teaching Fellow in Anatomy (appointment expired January 31, 1959).

GERALDINE F. GAUTHIER, M.S., Teaching Fellow in Anatomy.

### Affiliated:

ALAN S. COHEN, M.D., Assistant in Medicine.

Edward B. Gray, M.D., Assistant in Surgery.

JEROME GROSS, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.

CARL S. HOAR, M.D., Instructor in Surgery.

ALFRED POPE, M.D., Associate Professor of Neuropathology at the McLean Hospital (Massachusetts General Hospital).

RICHARD L. SIDMAN, M.D., Associate in Neuropathology at the Massachusetts General Hospital.

SERGEI P. SOROKIN, M.D., Research Fellow in Pathology.

ELLIOTT W. STRAUSS, M.D., Teaching Fellow in Medicine.

WILLIAM H. TIMBERLAKE, M.D., Clinical Associate in Neurology.

In the Department of Anatomy, instruction is given in gross human anatomy, histology, neurology, and embryology. Opportunities are also afforded for advanced work and investigation in these subjects.

The Department occupies the Morgan Anatomical Building, the dissecting rooms, being in the wing designated BI, and the laboratories for histology and embryology in the wing BII. There are separate rooms for fourth year and graduate students and for various kinds of technical work. There is a large library which contains complete files of the most important anatomical and morphological journals, together with many standard works of reference, and in an adjoining room there is a collection of about fifteen thousand pamphlets. A

card catalogue and a classified bibliography give ready access to the literature.

The embryological collection is a unique feature of the laboratory. It comprises about twenty-three hundred series of sections of carefully selected vertebrate embryos, and affords therefore opportunities for research in comparative embryology such as cannot be found elsewhere. The collection includes eighty series of sections of human embryos.

The Department owns exceptionally valuable neurological material for both teaching and research, including two entire human brains cut serially in the transverse and horizontal planes, with the sections alternately stained by the Pal-Weigert and Nissl methods.

### REQUIRED COURSES

Anatomy A and B. First Year. — The courses of the first year are intended to teach human anatomy, both gross and microscopic, together with the essentials of human embryology and neurology.

In the study of gross anatomy, students make a complete dissection of the human body in the first semester. Four students will be assigned to the same subject, and will work together during the course. The study of the skeleton is carried on with the dissection, and each student will be provided with a box of bones which may be kept throughout the course. There will be lectures or demonstrations which will serve to emphasize the clinical application of gross anatomical relations and to teach certain aspects of human biology not adequately treated in the textbooks. Special dissections made by prosectors from the second year class, frozen sections, and various anatomical specimens and preparations will be displayed to supplement the student's own dissections. Students are urged to examine these specimens carefully, and to discuss them informally with the instructors.

In the second semester gross anatomy will provide a morphological background for the correlative program.

That part of the course in microscopic anatomy given in the first semester is designed to give the student a familiarity with the normal appearances of cells and tissues. The histology presented in the second semester will form a part of the correlative teaching in which the major organ systems are studied. Neuroanatomy will be taught as part of the section of correlative teaching entitled "Neurosciences."

The development of tissues and organs is stressed. Opportunity is also given for the study of fresh tissues. The use of fresh tissues is intended to acquaint the student with the structure of living cells and with evidence of cellular functions. Numerous demonstrations are given to present the range of histological technique, including cytological and histochemical preparations. The fine structure of tissues as revealed by modern investigative tools and techniques is presented.

### FIRST YEAR

HOURS

Lectures, Drs. Greep, Edwards, Erikson, Barrnett, Pope, Scott, Weiss, Ladman, Padykula, Roth, Angevine, and Timberlake.

Demonstrations. To sections of the class, at the pleasure of the instructors.

Laboratory work.

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### ELECTIVE AND VOLUNTARY COURSES

- 1. Surgical Anatomy. Dr. EDWARDS and Associates. Whole course, one month.
- 20. Investigation. Dr. Greep and Associates. Opportunities are offered for students who wish to do special or advanced work.

# **Physiology**

EUGENE M. LANDIS, M.D., Ph.D., S.M. (hon.), George Higginson Professor of Physiology and Head of the Department.

JOHN R. PAPPENHEIMER, Ph.D., Career Investigator of the American Heart Association and Visiting Professor of Physiology.

A. CLIFFORD BARGER, M.D., Associate Professor of Physiology.

\*ARTHUR K. SOLOMON, Ph.D., D.Phil., Associate Professor of Biophysics.

ELWOOD HENNEMAN, M.D., Assistant Professor of Physiology.

ERNEST KNOBIL, Ph.D., Assistant Professor of Physiology.

RICHARD P. DURBIN, Ph.D., Associate in Physiology. (Absent September 1, 1958 to August 31, 1959.)

\* Appointment under the Committee on Medical Research in Biophysics.

WILLIAM B. KINTER, Ph.D., Associate in Physiology.

THOMAS H. WILSON, M.D., Associate in Physiology.

Francis E. Yates, M.D., Associate in Physiology.

JOHN L. DEC. DOWNER, Ph.D., Instructor in Physiology.

Susan Leeman, Ph.D., Instructor in Physiology.

PIERRE A. M. J. DUMONT, Ph.D., Research Fellow in Physiology (appointment expired November 30, 1958).

MORTON J. FRANKLIN, M.D., Research Fellow in Physiology.

SENRI HIRAKAWA, M.D., Research Fellow in Physiology (appointment expired August 31, 1958).

JACK L. Kostyo, Ph.D., Research Fellow in Physiology.

MARTIN R. LIEBOWITZ, M.D., Research Fellow in Physiology.

SIMEON LOCKE, M.D., Research Fellow in Physiology.

DONALD E. OKEN, M.D., Research Fellow in Physiology.

Donald W. Rennie, M.D., Research Fellow in Physiology.

# Affiliated:

JEAN MAYER, Ph.D., D.Sc., Associate Professor of Nutrition, S.P.H.

# REQUIRED COURSE

Physiology A. First Year. — Lectures are designed to acquaint the student with the more fundamental aspects of physiology and to consider in detail those portions of the subject that are essential to an understanding of the phenomena of health and disease in man.

By means of laboratory exercises the student is introduced as rapidly as possible to the observational methods and techniques available for studying function in man. Then equal emphasis is placed upon exercises illustrating in animals the experimental procedures employed for the detailed analysis of function and for the acquisition of a fundamental knowledge of physiology.

Conferences and demonstrations supplement the more formal instruction. Correlation with other medical sciences is stressed (see page 81 above).

### FIRST YEAR

**HOURS** 

Lectures and laboratory work. Drs. BARGER, DOWNER, HEN-NEMAN, KINTER, KNOBIL, LANDIS, PAPPENHEIMER, SOLO-MON, WILSON and YATES. 220

### ELECTIVE AND VOLUNTARY COURSES

20. Physiological Investigation in:

Cardiovascular and renal function. Drs. Barger, Kinter, Lan-DIS and YATES

Endocrinology. Dr. Knobil

Gastro-intestinal Physiology. Dr. Wilson

Neurophysiology. Dr. Henneman and Dr. Pappenheimer Psychobiology. Dr. Downer

21. Use of Isotopes in Biological Research. Dr. A. K. Solomon. Investigation not less than one full course. For admission consult Dr. Solomon directly.

# **Biological Chemistry**

A. BAIRD HASTINGS, Ph.D., A.M. (hon.), S.D. (hon.), Hamilton Kuhn Professor of Biological Chemistry and Head of the Department. (Retired December 31, 1958.)

ERIC G. BALL, Ph.D., S.D. (hon.), Professor of Biological Chemistry and Chairman of the Division of Medical Sciences of the Faculty of Arts and Sciences and Acting Head of the Department as of November 17, 1958.

JORDI FOLCH-PI, M.D., Professor of Neurochemistry at the McLean Hospital.

JOHN L. ONCLEY, Ph.D., Professor of Biological Chemistry.

LEWIS L. ENGEL, Ph.D., Associate Professor of Biological Chemistry.

Manfred L. Karnovsky, Ph.D., A.M. (hon.), Associate Professor of Biological Chemistry.

\*ARTHUR K. SOLOMON, Ph.D., D.PHIL., Associate Professor of Biophysics.

\* Appointment under the Committee on Medical Research in Biophysics.

- CLAUDE A. VILLEE, JR., Ph.D., Associate Professor of Biological Chemistry at the Boston Lying-in Hospital and Tutor in Preclinical Sciences.
- James Ashmore, Ph.D., Assistant Professor of Biological Chemistry (resigned July 31, 1958).
- DAVID H. ELWYN, Ph.D., Assistant Professor of Biological Chemistry.
- WALTER E. KNOX, M.D., Assistant Professor of Biological Chemistry at the New England Deaconess Hospital.
- F. LEE RODKEY, Ph.D., Edward S. Wood Assistant Professor of Biological Chemistry (resigned October 15, 1958).
- Fred M. Snell, Ph.D., M.D., Assistant Professor of Biological Chemistry.
- CORNELIUS F. STRITTMATTER, 4TH, Ph.D., Assistant Professor of Biological Chemistry.
- Douglas M. Surgenor, Ph.D., Assistant Professor of Biological Chemistry.
- DWAIN D. HAGERMAN, M.D., Associate in Biological Chemistry and Tutor in Medical Science.
- EDMUND C. C. LIN, A.B., Instructor in Biological Chemistry.
- Donald F. H. Wallach, M.D., Instructor in Biological Chemistry.
- DIETER WOLFF, M.D., Assistant in Biological Chemistry (resigned November 30, 1958).
- Samuel E. Allerton, B.A., Teaching Fellow in Biological Chemistry.
- EDWARD E. HAZEN, JR., M.S., Teaching Fellow in Biological Chemistry.

### RESEARCH APPOINTMENTS IN BIOLOGICAL CHEMISTRY

- RAPIER H. McMenamy, Ph.D., Research Associate in Biological Chemistry.
- Charles V. Robinson, Ph.D., Research Associate in Biological Chemistry.
- George Hauser, Ph.D., Research Associate in Biological Chemistry.

MARGARET J. HUNTER, Ph.D., Research Associate in Biological Chemistry.

Francis N. Lebaron, Ph.D., Research Associate in Biological

Chemistry.

Jonas E. Richmond, Ph.D., Research Associate in Biological Chemistry.

JOHN R. BORDER, M.D., Research Fellow in Biological Chemistry. Andre B. Borle, M.D., Research Fellow in Biological Chemistry.

NANCY G. Boucot, M.D., Research Fellow in Biological Chemistry.

Colin Green, Ph.D., Research Fellow in Biological Chemistry. Jean M. H. Hagen, Ph.D., Research Fellow in Biological Chemistry.

MARTHA L. LUDWIG, Ph.D., Research Fellow in Biological Chemistry

istry.

SHOSAKU NUMA, M.D., Research Fellow in Biological Chemistry (appointment expired August 31, 1958).

YASUZO TSUKADA, DR.MED.SCI., Research Fellow in Biological Chemistry (appointment expired December 31, 1958).

IRVING WELIKY, Ph.D., Research Fellow in Biological Chemistry.

# Affiliated:

Fredrick J. Stare, Ph.D., M.D., Professor of Nutrition, S.P.H.

D. Mark Hegsted, Ph.D., Associate Professor of Nutrition, S.P.H.

JAMES H. SHAW, Ph.D., Associate Professor of Biological Chemistry in the School of Dental Medicine.

JIN H. KINOSHITA, Ph.D., Assistant Professor of Biological Chemistry in the Howe Laboratory of Ophthalmology.

GEORGE NICHOLS, JR., M.D., Associate in Medicine.

# REQUIRED COURSE

BIOLOGICAL CHEMISTRY A. First Year. — During the first semester the lectures in Biological Chemistry discuss the chemical components of living matter and the metabolic processes common to all tissues.

Laboratory work deals with the physical and chemical concepts necessary to an understanding of living processes, and the fundamental chemical characteristics of biological compounds and enzymatic reactions.

During the second semester the lectures and laboratory work in biochemistry are interwoven with those given by the Departments of Physiology and Anatomy. In the first six weeks the Department of Biological Chemistry will deal with the following topics: inorganic chemical composition of body tissues and fluids and physical chemical factors governing their control: the transport of O<sub>2</sub> and CO<sub>2</sub> in the blood and acid-base balance. In the second six-week period, which explores the neuro-sciences, certain special aspects of the chemistry and metabolism of brain and nerve are the contributions of the Department of Biological Chemistry. The gastro-intestinal and endocrine systems will be studied in the final five-week period. The Department will present the chemical processes involved in digestion and absorption; the intermediary metabolism of the liver; the chemistry and metabolism of cholesterol, the bile acids, and the steroid hormones; and the regulatory effects of hormones in general on metabolism.

### FIRST YEAR

HOURS

Lectures and laboratory work. Drs. Hastings, Ball, Stare, Hegsted, Engel, Karnovsky, Knox, Rodkey, Surgenor, Villee, Elwyn, Snell, Strittmatter and Associates.

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# **ELECTIVE COURSES**

- 20. Biological Chemistry and Nutrition. Drs. Hastings, Ball, Stare and Associates. An opportunity is offered for special study in advanced biological chemistry and nutrition for one or more months. Arrangement for work may be made by consultation with members of the staff.
- Use of Isotopes in Biological Research. Dr. A. K. Solomon. Investigation not less than one full course. For admission consult Dr. Solomon directly.
- 22. Research in the Chemistry of Biological Substances and Systems. Drs. Oncley, Surgenor and Hunter. Investigation. Not less than one full course.

### VOLUNTARY COURSES

- 30. Advanced Biological Chemistry. Dr. Hastings and Associates. Time to be arranged.
- 31. Clinical Nutrition. Dr. STARE and Associates. Time to be arranged.
- 32. Advanced Biological Chemistry. Physical Chemistry of Proteins and Other Biological Substances. Dr. Oncley and Associates. Two afternoons a week at 2:00 p.m. on days to be arranged. First half-year. Lecture and Laboratory work.

# **Bacteriology**

- Bernard D. Davis, M.D., Professor of Bacteriology and Immunology and Head of the Department and Tutor in Preclinical Sciences.
- GEORGE P. BERRY, M.D., LL.D., A.M. (hon.), S.D. (hon.), LITT.D., L.H.D., Professor of Bacteriology and Dean of the Faculty of Medicine.
- ALBERT H. Coons, M.D., Career Investigator of the American Heart Association and Visiting Professor of Bacteriology and Immunology.
- John F. Enders, Ph.D., Professor of Bacteriology and Immunology at The Children's Hospital.
- Monroe D. Eaton, M.D., Associate Professor of Bacteriology and Immunology.
- Edward H. Kass, Ph.D., M.D., A.M. (hon.), Associate Professor of Bacteriology and Immunology.
- Boris Magasanik, Ph.D., A.M. (hon.), Associate Professor of Bacteriology and Immunology and Tutor in Preclinical Sciences.
- CH'IEN LIU, M.D., Assistant Professor of Bacteriology and Immunology (resigned September 15, 1958).
- H. EDWIN UMBARGER, Ph.D., Silas Arnold Houghton Assistant Professor of Bacteriology and Immunology.
- Byron H. Waksman, M.D., Assistant Professor of Bacteriology and Immunology at the Massachusetts General Hospital.

- Luigi Gorini, Ph.D. (Equiv.), Lecturer on Bacteriology and Immunology.
- HAROLD AMOS, Ph.D., Associate in Bacteriology and Immunology.
- Arnold F. Brodie, Ph.D., Associate in Bacteriology and Immunology.
- MARCUS S. BROOKE, Ph.D., Associate in Bacteriology and Immunology.
- LAWRENCE J. J. Kunz, Ph.D., Associate in Bacteriology and Immunology.
- John H. Hanks, Ph.D., Lecturer on Bacteriology and Immunology.
- HEATHER B. DONALD, Ph.D., Research Associate in Bacteriology and Immunology.
- Joel Mandelstam, Ph.D., Research Associate in Bacteriology (appointment expired January 31, 1959).
- Anthony J. Sbarra, Ph.D., Research Associate in Bacteriology and Immunology.
- JOHN H. WALLACE, Ph.D., Research Associate in Bacteriology and Immunology.
- BARBARA K. WATSON, Ph.D., Research Associate in Bacteriology and Immunology.
- Donald F. Bent, Ph.D., Instructor in Bacteriology and Immunology.
- ALVIN S. LEVINE, Ph.D., Instructor in Bacteriology and Immunology (appointment expired August 31, 1958).
- MORTIMER LITT, M.D., Instructor in Bacteriology and Immunology.
- HARRIS S. MOYED, Ph.D., Instructor in Bacteriology and Immunology.
- Frederick C. Neidhardt, Ph.D., Instructor in Bacteriology and Immunology.
- MORTON M. WEBER, Sc.D., Instructor in Bacteriology and Immunology.
- JOAN B. DANIELS, B.S., Assistant in Bacteriology.

Renee G. Naves, dr.-ès-science, Assistant in Bacteriology and Immunology.

NITYA ANAND, Ph.D., Research Fellow in Bacteriology and Im-

munology.

MORTON CIVEN, M.Sc., Research Fellow in Bacteriology and Immunology.

ALVIN J. CLARK, Ph.D., Research Fellow in Bacteriology and Immunology (appointment expired December 31, 1958).

HERBERT L. Ennis, Ph.D., Research Fellow in Bacteriology and Immunology (appointment expires February 28, 1959).

YEHESKEL S. HALPERN, Ph.D., Research Fellow in Bacteriology and Immunology.

Monto Ho, M.D., Research Fellow in Bacteriology and Immunology.

Shelby Kashket, Ph.D., Research Fellow in Bacteriology and Immunology.

AKIRA KATO, M.D., Research Fellow in Bacteriology and Immunology.

RICHARD I. LEAVITT, Ph.D., Research Fellow in Bacteriology and Immunology.

IOLANDA E. Low, M.D., Research Fellow in Bacteriology and Immunology.

ELIZABETH McFall, Ph.D., Research Fellow in Bacteriology and Immunology.

Maria C. Michaelides, Ph.D., Research Fellow in Bacteriology and Immunology.

EMMANUEL M. Roth, M.D., Research Fellow in Bacteriology and Immunology.

Boris Rotman, Ph.D., Research Fellow in Bacteriology and Immunology (appointment expired December 31, 1958).

# Affiliated:

JOHN C. SNYDER, M.D., Professor of Public Health Bacteriology and Dean of the School of Public Health.

JOHN B. MACDONALD, D.D.S., M.S., Ph.D., Professor of Oral Microbiology in the School of Dental Medicine and Tutor in Preclinical Sciences.

THOMAS H. WELLER, M.D., LL.D., Richard Pearson Strong Professor of Tropical Health in the School of Public Health. John G. Harter, M.D., Research Fellow in Medicine.

Howard M. Hiatt, M.D., Associate in Medicine and Tutor in Medical Science.

# REQUIRED COURSE

Bacteriology A. Second Year. — This course consists of lectures, laboratory exercises, and conferences, designed to acquaint the student with the principles of bacteriology, virology, immunology, and allergy. The fungi will also be briefly considered.

The first part of the course consists of an introduction to general microbiology, including the structure, physiology, metabolism, and genetics of microbes. Particular attention will then be given to the agents of infectious disease, with emphasis on those properties that are useful in their recognition and those that contribute to their pathogenicity. Lessons on host-parasite relations and allergy will be correlated with pathology, those on chemotherapy will be correlated with pharmacology, and exercises conducted by clinical departments will introduce the student to infectious disease in man.

While the course is designed primarily as a preparation for later clinical work, considerable attention will also be given to illustrating the value of unicellular organisms in studying problems common to all cells. This material includes aspects of cell physiology, intermediary metabolism, and chemical genetics.

### SECOND YEAR

**HOURS** 

Lectures and laboratory work. Drs. Davis, Eaton and Staff.

First half-year. Most exercises take place on Monday,
Wednesday, and Friday afternoons.

# ELECTIVE AND VOLUNTARY COURSE

20. Research. Qualified students may arrange time with a member of the staff. Equipment and instruction are available for the

usual procedures of the fields designated, and also for electron microscopy, animal cell culture, and localization of antigens and antibodies by fluorescence microscopy.

Cell physiology and metabolism. Drs. Davis, Magasanik, Um-

barger, Gorini, Brodie, Brooke.

Virology. Drs. Enders, Eaton.

Bacteriophage. Dr. Amos.

Immunology. Drs. Coons, Waksman.

# **Pathology**

ARTHUR T. HERTIG, M.D., Shattuck Professor of Pathological Anatomy and Head of the Department.

Benjamin Castleman, M.D., Clinical Professor of Pathology.

GUSTAVE J. DAMMIN, M.D., Professor of Pathology at the Peter Bent Brigham Hospital.

Sidney Farber, M.D., Professor of Pathology at The Children's Hospital.

DAVID G. FREIMAN, M.D., Clinical Professor of Pathology.

JACOB FURTH, M.D., Clinical Professor of Pathology.

SHIELDS WARREN, M.D., D. Sc. (hon.), Professor of Pathology at the New England Deaconess Hospital.

SAMUEL P. HICKS, M.D., Associate Clinical Professor of Pathology.

WILLIAM A. MEISSNER, M.D., Associate Clinical Professor of Pathology.

JOHN M. CRAIG, M.D., Assistant Professor of Pathology at The Children's Hospital.

IRA GORE, M.D., Assistant Clinical Professor of Pathology.

PHILIP M. LECOMPTE, M.D., Assistant Clinical Professor of Pathology.

Guido Majno, M.D., Assistant Professor of Pathology.

Donald G. McKay, M.D., Assistant Professor of Pathology at the Boston Lying-in Hospital and the Free Hospital for Women.

ROBERT E. SCULLY, M.D., Assistant Clinical Professor of Pathology.

Edgar B. Taft, M.D., Assistant Professor of Pathology at the Massachusetts General Hospital.

Austin L. Vickery, Jr., M.D., Assistant Clinical Professor of Pathology.

Bernard F. Trum, D.V.M., Lecturer on Veterinary Medicine in the Department of Pathology.

JOHN P. AYER, M.D., M.Sc., Clinical Associate in Pathology.

Kurt Benirschke, M.D., Associate in Pathology at the Boston Lying-in Hospital.

DANTE F. CAMPAGNA-PINTO, M.D., Clinical Associate in Pathology.

RICHARD B. COHEN, M.D., Associate in Pathology at the Massachusetts General Hospital.

GEORGE W. CURTIS, M.D., Clinical Associate in Pathology.

OLIVE GATES, M.D., Clinical Associate in Pathology.

EARL E. HELLERSTEIN, M.D., Associate in Pathology.

THOMAS C. JONES, D.V.M., Clinical Associate in Pathology.

JOHANNES P. KULKA, M.D., Clinical Associate in Pathology.

HAZEL MANSELL, M.B., CH.B., Associate in Pathology.

Agnes B. Russfield, Ph.D., M.D., Associate in Pathology at the Massachusetts General Hospital (resigned August 31, 1958).

JACOB N. SHANBERGE, M.D., Clinical Associate in Pathology.

RONALD C. SNIFFEN, M.D., Clinical Associate in Pathology.

DAVID SPIRO, M.D., Ph.D., Associate in Pathology at the Massachusetts General Hospital.

JOHN L. TULLIS, M.D., Clinical Associate in Pathology.

BETTY B. G. UZMAN, M.D., Associate in Pathology at The Children's Hospital.

GORDON F. VAWTER, M.D., Clinical Associate in Pathology.

G. Kenneth Mallory, M.D., Lecturer on Pathology.

STANLEY L. ROBBINS, M.D., Lecturer on Pathology.

SHELDON C. SOMMERS, M.D., Lecturer on Pathology.

WADI A. BARDAWIL, M.D., Research Associate in Pathology.

ELKAN R. BLOUT, Ph.D., Research Associate in Pathology.

ALLEN C. CROCKER, M.D., Research Associate in Pathology.

Isaac Djerassi, M.D., Research Associate in Pathology.

Gerald D. Fasman, Ph.D., Research Associate in Pathology.
George E. Foley, D.Sc., Research Associate in Pathology.
Shou-Cheng J. Fu, Ph.D., Research Associate in Pathology.
Morris N. Green, Ph.D., Research Associate in Pathology.
Alfred H. Handler, Ph.D., Research Associate in Pathology.
Lorna D. Johnson, M.D., Research Associate in Pathology.
Wan Ching Lu, Ph.D., Research Associate in Pathology.
Charlotte L. Maddock, Ph.D., Research Associate in Pathology.
Adele K. Magasanik, Ph.D., Research Associate in Pathology.
Edward J. Modest, Ph.D., Research Associate in Pathology.
Felix Rodriguez (y Legaspi), M.D., Research Associate in Pathology.

GEORGE YERGAINIAN, Ph.D., Research Associate in Pathology.

LEONARD ATKINS, M.D., Instructor in Pathology.

Bradley E. Copeland, M.D., Instructor in Pathology.

JOSEPH M. CORSON, M.D., Instructor in Pathology.

DIANE W. CROCKER, M.D., Instructor in Pathology.

Frederick D. Dallenbach, M.D., Instructor in Pathology (resigned October 31, 1958).

CHARLES J. DE WAN, M.D., Instructor in Pathology.

SHIRLEY G. DRISCOLL, M.D., Instructor in Pathology.

HUGH R. DUDLEY, JR., M.D., Instructor in Pathology.

JAMES T. DUHIG, M.B., CH.B., Instructor in Pathology.

ROBERT FIENBERG, M.D., Instructor in Pathology.

LLOYD C. FOGG, Ph.D., Instructor in Pathology.

GISELA HELLWEG, M.D., Instructor in Pathology (resigned August 31, 1958).

JOHN D. HOUGHTON, M.D., Instructor in Pathology.

Morris J. Karnovsky, M.B., Ch.B., Instructor in Pathology.

MERLE A. LEGG, M.D.C.M., Instructor in Pathology.

Franz von Lichtenberg, M.D., Instructor in Pathology.

Joseph C. Merriam, Jr., M.D., Instructor in Pathology.

SI-CHUN MING, M.D., Instructor in Pathology.

JOHN A. PETERS, M.D., Instructor in Pathology.

REUBEN Z. SCHULZ, M.D., Instructor in Pathology.

STEPHEN M. SHEA, M.B., CH.B., Instructor in Pathology.

Eugene T. Standley, M.D., Instructor in Pathology (resigned November 30, 1958).

JOR SUYEMOTO, M.D., Instructor in Pathology.

Aron Elias Szulman, M.B., Ch.B., Instructor in Pathology.

PRISCILLA D. TAFT, M.D., Instructor in Pathology.

RICHARD A. ADAMS, Ph.D., Assistant in Pathology.

MYRTON F. BEELER, M.D., Assistant in Pathology (resigned September 13, 1958).

RITA F. BUFFETT, Ph.D., Assistant in Pathology.

ARTHUR I. COHEN, Ph.D., Assistant in Pathology.

GILBERT H. FRIEDELL, M.D., Assistant in Pathology.

CARL A. HARRIS, Ph.D., M.D., Assistant in Pathology.

RICHARD A. MACDONALD, M.D., Assistant in Pathology.

ROBERT E. McCarthy, Ph.D., Assistant in Pathology.

HANS MEIER, D.V.M., Assistant in Pathology.

James A. Shaka, M.D., Assistant in Pathology.

RUSSELL P. SHERWIN, M.D., Assistant in Pathology.

Suprabhat Chatterjee, Ph.D., Research Fellow in Pathology.

Kelly H. Clifton, Ph.D., Research Fellow in Pathology.

GERALD E. GAULL, M.D., Research Fellow in Pathology.

JEANA D. LEVINTHAL, M.D., Research Fellow in Pathology.

LEWIS T. MANN, JR., Ph.D., Research Fellow in Pathology.

STANISLAV A. NORKIN, M.D., Research Fellow in Pathology.

Saburo Ono, M.D., Research Fellow in Pathology.

EDWARD S. REYNOLDS, JR., M.D., Research Fellow in Pathology.

SERGEI P. SOROKIN, M.D., Research Fellow in Pathology.

НIDEYUKA TSUKADA, M.D., Research Fellow in Pathology.

Ennio Vivaldi, M.D., Research Fellow in Pathology.

ALEXANDER BRESLOW, M.D., Teaching Fellow in Pathology.

PETER G. BULLOUGH, M.B., CH.B., Teaching Fellow in Pathology.

ALAN B. COOPER, M.D., Teaching Fellow in Pathology.

RAMZI S. COTRAN, M.D., Teaching Fellow in Pathology.

BERNARD CZERNOBILSKY, M.D., Teaching Fellow in Pathology.

Josefina F. de Venecia, M.D., Teaching Fellow in Pathology.

GEORGE T. DIAMANDOPOULOS, M.D., Teaching Fellow in Pathology.

GEORGE R. DICKERSIN, M.D., Teaching Fellow in Pathology.

ROBERT L. EHRMANN, M.D., Teaching Fellow in Pathology.

DONALD FELDMAN, M.D., Teaching Fellow in Pathology.

ROBERT S. HARPER, M.D., Teaching Fellow in Pathology.

HUMPHREY F. D. LLOYD, M.B. CH.B. Teaching Fellow in Par-

HUMPHREY E. D. LLOYD, M.B., CH.B., Teaching Fellow in Pathology.

RAYMOND A. McBride, M.D., Teaching Fellow in Pathology. Sanford I. Roth, M.D., Teaching Fellow in Pathology. Joseph D. Sabella, M.D., Teaching Fellow in Pathology. Richard Stenger, M.D., Teaching Fellow in Pathology. Alvin Volkman, M.D., Teaching Fellow in Pathology. Sumner Wood, Jr., M.D., Teaching Fellow in Pathology.

## Affiliated:

JOHN C. SNYDER, M.D., Professor of Public Health Bacteriology and Dean of the School of Public Health.

REIDAR F. SOGNNAES, Ph.D., D.M.D., Charles A. Brackett Professor of Oral Pathology and Associate Dean of the School of Dental Medicine.

DAVID G. COGAN, M.D., Professor of Ophthalmology and Director of the Howe Laboratory of Ophthalmology.

Walter F. Lever, M.D., Assistant Clinical Professor of Dermatology.

STEPHEN B. ANDRUS, M.D., Assistant Professor of Pathology in the Department of Nutrition.

Paul Goldhaber, D.D.S., Associate in Oral Pathology. Arthur E. O'Dea, M.D., Assistant in Legal Medicine. Charles I. Levene, M.D., Research Fellow in Medicine.

## REQUIRED COURSE

Pathology A. Second Year. — The second year course in pathology is planned as a systematic survey of pathology. It consists of lectures, laboratory study of pathologic histology and demonstrations of gross pathologic material, partly from fixed specimens drawn from the Warren Museum, but more extensively from demonstrations of fresh

autopsy and surgical material brought from the laboratories of the affiliated hospitals. Students visit the Pathology Laboratories of the Boston City Hospital, Massachusetts General Hospital, Peter Bent Brigham Hospital, Children's Hospital, Beth Israel Hospital, the Free Hospital for Women, the New England Deaconess Hospital, Boston Lying-in Hospital and the South Huntington Avenue Veterans Hospital, for participation in performance of autopsies.

Lectures are given three days in the week by the staff. The course is divided roughly, though not sharply, into general and special pathology, covering in the first part of the year basic pathologic processes, such as tissue injury and repair, inflammation, tissue responses to specific infectious agents and neoplasia. Owing to the revision of the second year curriculum, special pathology is now integrated with the other second year courses and designated as "Pathologic Physiology." Seven organs or systems will be thus considered during the present academic year: hematopoietic system, kidney, cardiovascular system, respiratory system, gastro-intestinal system, endocrine system and nervous system. The pathology of the eye, skin, oral cavity and vitamin deficiencies are covered in collaboration with other departments of the University.

Courses in parasitology and neuropathology are given separately by the Department of Tropical Public Health of the Harvard School of Public Health and the Department of Neurology and Psychiatry, respectively, but under the nominal jurisdiction of this Department. The course in clinical pathology is under the direction of the Department of Medicine and is part of the integrated course "Pathologic Physiology."

#### SECOND YEAR

HOURS

Lectures, Dr. Herrig and Associates. Laboratory work. Dr. Herrig and Associates.

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## FOURTH YEAR ELECTIVE COURSES

- 1. Advanced Pathology. Dr. Castleman. M.G.H. Whole course, all day.
- 2. Advanced Pathology. Dr. G. K. Mallory, B.C.H. Whole course, all day.
- 3. Advanced Pathology. Dr. Dammin, P.B.B.H. Whole course, all day.

- 4. The Pathology of the Endocrine Diseases. Dr. S. WARREN. N.E.D.H. Whole course, all day.
- 5. The Pathology of Tumors. Dr. S. Warren. N.E.D.H. Whole course, all day.
- 6. Advanced Pathology. Dr. FARBER. C.H. Whole course, all day.
- 7. Advanced Pathology. Dr. Freiman. B.I.H. Whole course, all day.

## **Tropical Public Health**

This course is given by members of the Faculty of the Harvard School of Public Health.

- THOMAS H. WELLER, M.D., LL.D., Richard Pearson Strong Professor of Tropical Public Health and Head of the Department.
- Donald L. Augustine, S.D., S.D. (hon.), Professor of Tropical Public Health.
- Franklin A. Neva, M.D., Associate Professor of Tropical Public Health.
- ELI CHERNIN, S.D., Assistant Professor of Tropical Public Health.
- EDWARD H. MICHELSON, Ph.D., Instructor in Tropical Public Health.
- CHIA-TUNG PAN, M.D., M.P.H., Instructor in Tropical Public Health.

# Required Course

Parasitology A. Second Year. — The important helminth and protozoan parasites of man are considered with reference to their geographic distribution, identification, mode of transmission, pathogenesis, immune reactions and methods for prevention and control. Clinical aspects and chemotherapy of parasitic diseases are discussed. Emphasis is given to methods of laboratory diagnosis.

#### SECOND YEAR

HOURS

Lectures, demonstrations, and laboratory work. Dr. Weller and Staff. Tuesday mornings and Friday afternoons, January and February.

### VOLUNTARY COURSES

Courses offered by the Department of Tropical Public Health in the School of Public Health are open, as electives, to third and fourth year students.

## Pharmacology

- OTTO KRAYER, M.D., A.M. (hon.), M.D. (hon.), Charles Wilder Professor of Pharmacology and Head of the Department.
- Peter B. Dews, M.B., Ch.B., Ph.D., Assistant Professor of Pharmacology.
- PAUL B. HAGEN, M.B., CH.B., Assistant Professor of Pharmacology.
- MARTIN LUBIN, M.D., Ph.D., Assistant Professor of Pharmacology.
- Frederick C. Uhle, Ph.D., Assistant Professor of Chemistry in the Department of Pharmacology.
- WERNER E. FLACKE, M.D., Associate in Pharmacology.
- OLEG JARDETZKY, M.D., Ph.D., Associate in Pharmacology.
- ALEXANDER D. KENNY, Ph.D., Associate in Pharmacology at The Children's Hospital.
- Ullrich G. Trendelenburg, M.D., Ph.D., Associate in Pharmacology.
- NORMAN WEINER, M.D., Associate in Pharmacology.
- MARION F. NARROD, Ph.D., Research Associate in Pharmacology.
- Fredy R. Sallmann, Ph.D., Research Associate in Chemistry in the Department of Pharmacology.
- JOHN R. BLINKS, M.D., Instructor in Pharmacology and Tutor in Medical Science.
- DENIS F. HAWKINS, Ph.D., M.B., Ch.B., Instructor in Pharmacology.
- Frank A. Howard, M.D., Instructor in Pharmacology and Tutor in Medical Science.
- WILLIAM H. Morse, A.M., Instructor in Psychology in the Department of Pharmacology.
- WALTER R. BURACK, M.D., Research Fellow in Pharmacology.

PAUL R. DRASKOCZY, M.D., Research Fellow in Pharmacology.

JOHN L. FALK, Ph.D., Research Fellow in Psychology in the Department of Pharmacology (resigned August 31, 1958). WILLIAM W. FLEMING, Jr., Ph.D., Research Fellow in Pharmacol-

ogy.

SRI R. KOTTEGODA, M.B., B.S., D.PHIL., Research Fellow in Pharmacology (appointment expired August 31, 1958).

FU-LI LEE, M.D., Research Fellow in Pharmacology (appointment expired September 30, 1958).

SANTA RAMACHANDRAN, M.B., B.S., Research Fellow in Pharmacology (appointment expired August 31, 1958).

HERBERT R. SCHROTER, Ph.D., Research Fellow in Chemistry in the Department of Pharmacology.

MARGRIT SPECKERT, Equiv. to A.B., Research Fellow in Pharmacology (appointment expired August 31, 1958).

THANWARDAS K. WADHWANI, D.Sc. (Equiv.), Research Fellow in Pharmacology.

Douglas R. Waud, M.D., Research Fellow in Pharmacology.

# REQUIRED COURSE

Pharmacology A. Second Year. — The course in Pharmacology consists of lectures, demonstrations, experimental laboratory exercises and conferences. Concepts of general importance in pharmacology and toxicology are presented and the opportunity is provided for students to become acquainted with important drugs. Emphasis is placed on those actions of pharmacological agents which help in understanding the disordered physiology of disease and which are of importance in the rational treatment of disease. The mode of action of important drugs is discussed. In the laboratory, the student is able to become acquainted at first hand with some of the experimental facts, obtained from studies on man and animals, which provide the starting points for the analysis of pharmacological effects.

#### SECOND YEAR

**HOURS** 

Lectures. Dr. Krayer and Associates. One hour, three times a week: Tuesday, Thursday and Saturday mornings, first

half-year. Members of the staff of the Department of Pharmacology will continue the teaching of Pharmacology in collaboration with other departments in the integrated program of the second half-year.

Laboratory work and conferences. Dr. Krayer and Associates. Tuesday mornings, first half-year. Further exercises in Pharmacology will be conducted as part of the integrated program of the second half-year.

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## ELECTIVE AND VOLUNTARY COURSES

20. Pharmacological Investigation on:

Cardiovascular system. Drs. Blinks, Flacke, and Krayer. Endocrinology. Dr. Munson.

Psychopharmacology. Drs. Dews and Morse.

Muscle function. Dr. Lubin.

Pharmacology and metabolism of simple amines. Dr. HAGEN.

Pharmacology of autonomic ganglia. Dr. Trendelenburg.

Metabolic actions of drugs. Drs. JARDETZKY and WEINER.

Pharmacology of bone. Dr. Kenny.

21. Structural and synthetic studies on steroid and indole alkaloids. Dr. Uhle.

# Legal Medicine

RICHARD FORD, M.D., Assistant Professor of Legal Medicine and Acting Head of the Department.

MICHAEL A. LUONGO, M.D., Associate in Legal Medicine.

WILLIAM J. CURRAN, LL.M., Lecturer on Law in Department of Legal Medicine.

GEORGE G. KATSAS, M.D., Research Associate in Legal Medicine.

ELVERA J. ALGERI, S.B., Assistant in Legal Medicine.

ARTHUR J. McBAY, Ph.D., Assistant in Legal Medicine.

ARTHUR E. O'DEA, M.D., Assistant in Legal Medicine.

Frank C. Stratton, S.B., Assistant in Legal Medicine.

Lola M. Walker, A.M., Assistant in Legal Medicine.

Walter B. King, Jr., M.D., Research Fellow in Legal Medicine.

### Affiliated:

LEONARD ATKINS, M.D., Instructor in Pathology.

GEORGE W. CURTIS, M.D., Clinical Associate in Pathology.

JACK R. EWALT, M.D., A.M. (hon.), Professor of Psychiatry.

## REQUIRED COURSE

Third Year. — Twelve lectures. The circumstances in which medical evidence is essential to the administration of justice. Mechanisms and pathological characteristics of injuries most frequently responsible for litigation. Laws and legal principles relating to the practice of medicine and to the physician-patient relationship.

#### THIRD YEAR

**HOURS** 

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Lectures. Dr. Ford and Associates. H.M.S. Twelve Fridays of the first half-year, at 4.15 P.M.

### Medicine

- Walter Bauer, M.D., A.M. (hon.), Jackson Professor of Clinical Medicine and Head of the Department at the Massachusetts General Hospital.
- HERRMAN L. BLUMGART, M.D., Professor of Medicine and Head of the Department at the Beth Israel Hospital.
- WILLIAM B. CASTLE, M.D., S.M. (hon.), M.D. hon.), S.D. (hon.), George Richards Minot Professor of Medicine and Head of the Department at the Boston City Hospital.
- GEORGE W. THORN, M.D., LL.D., S.D. (hon.), Hersey Professor of the Theory and Practice of Physic and Head of the Department at the Peter Bent Brigham Hospital.
- PAUL C. Zamecnik, M.D., Collis P. Huntington Professor of Oncologic Medicine and Director of the J. Collins Warren Laboratories of the Huntington Memorial Hospital and Chairman of the Executive Committee of the Departments of Medicine.
- C. Sidney Burwell, M.D., LL.D., S.D. (hon.), Samuel A. Levine Professor of Medicine.

- Fuller Albright, M.D., S.D. (hon.), Associate Professor of Medicine.
- Benjamin Alexander, M.D., Associate Professor of Medicine at the Beth Israel Hospital.
- EDWARD F. BLAND, M.D., Associate Clinical Professor of Medicine.
- CHARLES S. DAVIDSON, M.D., C.M., Associate Professor of Medicine.
- LAURENCE B. ELLIS, M.D., Associate Clinical Professor of Medicine.
- Kendall Emerson, Jr., M.D., Associate Clinical Professor of Medicine, and Assistant Dean of the Faculty of Medicine for Admissions.
- EUGENE C. EPPINGER, M.D., Associate Clinical Professor of Medicine and Assistant Dean of the Faculty of Medicine for Courses for Graduates.
- MAXWELL FINLAND, M.D., Associate Professor of Medicine.
- A. Stone Freedberg, M.D., Associate Professor of Medicine at the Beth Israel Hospital.
- SEYMOUR J. GRAY, M.D., Ph.D., Associate Clinical Professor of Medicine.
- THOMAS A. WARTHIN, M.D., Associate Clinical Professor of Medicine.
- PAUL M. ZOLL, M.D., Associate Clinical Professor of Medicine.
- Walter H. Abelmann, M.D., Assistant Professor of Medicine and Tutor in Medical Science.
- MARK D. ALTSCHULE, M.D., Assistant Clinical Professor of Medicine.
- THEODORE L. BADGER, M.D., Assistant Clinical Professor of Medicine.
- WILLIAM S. BECK, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.
- ROBERT L. BERG, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital (resigned September 30, 1958).
- EVAN CALKINS, M.D., Assistant Professor of Medicine.

- EARLE M. CHAPMAN, M.D., Assistant Clinical Professor of Medicine.
- HARRY A. DEROW, M.D., Assistant Clinical Professor of Medicine.
- Lewis Dexter, M.D., Assistant Professor of Medicine at the Peter Bent Brigham Hospital and Tutor in Medicine.
- ALLAN J. ERSLEV, M.D., Assistant Professor of Medicine.
- DALE G. FRIEND, M.D., Assistant Professor of Medicine at the Peter Bent Brigham Hospital.
- Frank H. Gardner, M.D., Assistant Professor of Medicine.
- SAMUEL L. GARGILL, M.D., Assistant Clinical Professor of Medicine.
- JEROME GROSS, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.
- MILTON W. HAMOLSKY, M.D., Assistant Professor of Medicine and Tutor in Medical Science.
- DAVID HURWITZ, M.D., Assistant Clinical Professor of Medicine.
- SIDNEY H. INGBAR, M.D., Assistant Professor of Medicine.
- ALEXANDER LEAF, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.
- HAROLD D. LEVINE, M.D., Assistant Clinical Professor of Medicine.
- Francis C. Lowell, M.D., Assistant Professor of Medicine at the Massachusetts General Hospital.
- ALEXANDER MARBLE, M.D., Assistant Clinical Professor of Medicine.
- JOHN P. MERRILL, M.D., Assistant Professor of Medicine.

V

- Joseph E. F. Riseman, M.D., Assistant Clinical Professor of Medicine.
- MARIAN W. ROPES, M.D., Assistant Clinical Professor of Medicine.
- CHARLES L. SHORT, M.D., Assistant Clinical Professor of Medicine.
- John B. Stanbury, M.D., Assistant Professor of Medicine.
- RICHARD P. STETSON, M.D., Assistant Clinical Professor of Medicine.
- BERT L. VALLEE, M.D., Assistant Professor of Medicine and Tutor in Medical Science.

ARTHUR L. WATKINS, M.D., Assistant Clinical Professor of Medicine.

STANFORD WESSLER, M.D., Assistant Professor of Medicine and Tutor in Medical Science.

Louis Wolff, M.D., Assistant Clinical Professor of Medicine.

Louis Zetzel, M.D., Assistant Clinical Professor of Medicine.

HOWARD B. SPRAGUE, M.D., Lecturer on Medicine.

GEORGE E. ALTMAN, M.D., Clinical Associate in Medicine.

MYLES P. BAKER, M.D., Clinical Associate in Medicine.

WILLIAM H. BAKER, M.D., Clinical Associate in Medicine.

C. CABELL BAILEY, M.D., Clinical Associate in Medicine.

Benjamin M. Banks, M.D., Clinical Associate in Medicine.

THEODORE B. BAYLES, M.D., Clinical Associate in Medicine.

SAMUEL B. BEASER, M.D., Clinical Associate in Medicine.

Frederick S. Bigelow, M.D., Associate in Medicine.

RICHARD A. BLOOMFIELD, M.D., Clinical Associate in Medicine.

NANCY L. R. BUCHER, M.D., Associate in Medicine at the Massachusetts General Hospital (absent through February 28, 1959).

THOMAS C. CHALMERS, M.D., Clinical Associate in Medicine.

SIDNEY COHEN, M.D., Associate in Medicine at the Beth Israel Hospital and Tutor in Medical Science (resigned August 31, 1958).

PERRY J. CULVER, M.D., Clinical Associate in Medicine.

ALBERT I. C. DEFRIEZ, M.D., Clinical Associate in Medicine.

CLIFFORD L. DERICK, M.D., C.M., Clinical Associate in Medicine.

CHARLES H. DUTOIT, M.D., Associate in Medicine at the Massachusetts General Hospital.

RICHARD A. FIELD, M.D., Associate in Medicine at the Massachusetts General Hospital.

GREENE S. FITZHUGH, M.D., Clinical Associate in Medicine.

Norbert Freinkel, M.D., Associate in Medicine.

PAUL FREMONT-SMITH, M.D., Clinical Associate in Medicine.

JOSEPH W. GARDELLA, M.D., Clinical Associate in Medicine and Assistant Dean for Student Affairs in the Faculty of Medicine.

JOHN G. GIBSON, 2D, M.D., Associate in Medicine at the Peter Bent Brigham Hospital.

WALTER T. GOODALE, M.D., Clinical Associate in Medicine.

RICHARD GORLIN, M.D., Associate in Medicine.

HOWARD H. HIATT, M.D., Associate in Medicine and Tutor in Medical Science.

MAHLON B. HOAGLAND, M.D., Assocaite in Medicine.

FREDERIC L. HOCH, M.D., Associate in Medicine and Tutor in Medical Science.

Kurt J. Isselbacher, M.D., Associate in Medicine at the Massachusetts General Hospital.

JAMES H. JANDL, M.D., Associate in Medicine.

Roger W. Jeanloz, D.Sc., Associate in Organic Chemistry in the Department of Medicine at the Massachusetts General Hospital.

ALFRED KRANES, M.D., Clinical Associate in Medicine.

GEORGE S. KURLAND, M.D., Clinical Associate in Medicine.

JACOB LERMAN, M.D., Clinical Associate in Medicine.

ARTHUR J. LINENTHAL, M.D., Clinical Associate in Medicine.

DAVID LITTMANN, M.D., Clinical Associate in Medicine.

ROBERT B. LOFTFIELD, Ph.D., Associate in Organic Chemistry in the Department of Medicine.

F. WILLIAM MARLOW, JR., M.D., Clinical Associate in Medicine.

JANET W. McARTHUR, M.D., Clinical Associate in Medicine.

DUDLEY MERRILL, M.D., Clinical Associate in Medicine.

JAMES METCALFE, M.D., Associate in Medicine (absent from August 15, 1958 to November 15, 1958).

ROBERT T. MONROE, M.D., Clinical Associate in Medicine.

GORDON S. MYERS, M.D., Associate in Medicine at the Massachusetts General Hospital.

Don H. Nelson, M.D., Associate in Medicine and Tutor in Medical Science.

GEORGE NICHOLS, JR., M.D., Associate in Medicine.

HELEN S. PITTMAN, M.D., Clinical Associate in Medicine.

Albert E. Renold, M.D., Associate in Medicine.

EUGENE D. ROBIN, M.D., Associate in Medicine.

Rudi Schmid, M.D., Ph.D., Associate in Medicine.

ALBERT O. SEELER, M.D., Clinical Associate in Medicine.

LLOYD H. SMITH, JR., M.D., Associate in Medicine at the Massachusetts General Hospital.

SAMUEL STEARNS, M.D., Clinical Associate in Medicine.

J. SYDNEY STILLMAN, JR., M.D., Clinical Associate in Medicine.

JOHN D. STOECKLE, M.D., Associate in Medicine at the Massachusetts General Hospital.

Morton N. Swartz, M.D., Associate in Medicine at the Massachusetts General Hospital.

MELVIN I. STURNICK, M.D., Clinical Associate in Medicine.

F. H. LASKEY TAYLOR, Ph.D., Associate in Research Medicine.

RALPH E. THIERS, Ph.D., Associate in Organic Chemistry in the Department of Medicine.

JAMES L. TULLIS, M.D., Clinical Associate in Medicine.

ROE E. WELLS, M.D., Clinical Associate in Medicine.

NORMAN ZAMCHECK, M.D., Clinical Associate in Medicine.

CLARK W. HEATH, M.D., Lecturer on Medicine.

MAURICE B. STRAUSS, M.D., Lecturer on Medicine.

SAUL ARONOW, Ph.D., Research Associate in Medicine.

GORDON L. BROWNELL, PH.D., Research Associate in Medicine.

JOHN GERGELY, Ph.D., M.D., Research Associate in Medicine.

LIPPMAN H. GERONIMUS, Ph.D., Research Associate in Bacteriology & Immunology in the Department of Medicine (appointment expired August 31, 1958).

FLORENCE W. HAYNES, Ph.D., Research Associate in Medicine.

GABRIEL ISAAC, M.D., Research Associate in Medicine.

ELIZABETH B. KELLER, Ph.D., Research Associate in Medicine (resigned September 30, 1958).

MITSUKO T. LAFORET, M.D., Research Associate in Medicine (appointment expired July 31, 1958).

CARROLL M. LEEVY, M.D., Research Associate in Medicine.

Sidney Leskowitz, Ph.D., Research Associate in Bacteriology and Immunology in the Department of Medicine.

JOHN W. LITTLEFIELD, M.D., Research Associate in Medicine.

SAUL MALKIEL, Ph.D., Research Associate in Medicine.

Josip Matovinovic, M.D., Research Associate in Medicine (appointment expired December 31, 1958).

JOHN R. MORETON, M.D., Research Associate in Medicine.

Benjamin J. Murawski, Ph.D., Research Associate in Psychology in the Department of Medicine.

NANCY P. NICHOLS, M.D., Research Associate in Medicine.

LEONA R. NORMAN, M.D., Research Associate in Medicine.

JEANETTE C. OPSAHL, M.D., Ph.D., Research Associate in Medicine.

MAURICE M. PECHET, Ph.D., M.D., Research Associate in Medicine.

CARL A. PRICE, Ph.D., Research Associate in Medicine.

GRACE M. ROURKE, M.S., Research Associate in Medicine.

KARL SCHMID, Ph.D., Research Associate in Medicine.

LEONARD B. SPECTOR, Ph.D., Research Associate in Medicine.

PIERRE J. STOFFYN, Ph.D., Research Associate in Medicine.

HELENA Wong, M.D., Research Associate in Medicine.

IRVING P. ACKERMAN, M.D., Instructor in Medicine and Tutor in Medical Science.

ALAN C. AISENBERG, M.D., Ph.D., Instructor in Medicine and Tutor in Medical Science.

VICTOR G. BALBONI, M.D., Instructor in Medicine.

WILLIAM H. BATCHELOR, M.D., Instructor in Medicine.

PATRICIA H. BENEDICT, M.D., Instructor in Medicine.

JOHN A. BENSON, JR., M.D., Instructor in Medicine.

Daniel S. Berstein, M.D., Instructor in Medicine.

Kenneth T. Bird, M.D., Instructor in Medicine.

Morton G. Brown, M.D., Instructor in Medicine.

ROBERT E. BROWNLEE, M.D., Instructor in Medicine.

JOHN B. CADIGAN, JR., M.D., Instructor in Medicine.

GEORGE F. CAHILL, JR., M.D., Instructor in Medicine.

Edmund J. Callahan, III, M.D., Instructor in Medicine.

WALTER H. CASKEY, M.D., Instructor in Medicine.

JOHN W. CASS, JR., Ph.D., M.D., Instructor in Medicine.

Andrew W. Contratto, M.D., Instructor in Medicine.

Augustus T. Crocker, M.D., Instructor in Medicine.

SETH C. CROCKER, M.D., Instructor in Medicine.

LEONARD W. CRONKHITE, JR., M.D., Instructor in Medicine.

JAMES F. CUMMINS, M.D., Instructor in Medicine.

WILLARD DALRYMPLE, M.D., Instructor in Medicine.

BRIANT L. DECKER, M.D., Instructor in Medicine.

Ellis Dresner, M.D., Instructor in Medicine.

DANIEL S. ELLIS, M.D., Instructor in Medicine.

JAMES J. FEENEY, M.D., Instructor in Medicine.

JEROME W. FISCHBEIN, M.D., Instructor in Medicine.

Anne P. Forbes, M.D., Instructor in Medicine.

GERALD S. FOSTER, M.D., Instructor in Medicine.

JOHN G. FREYMANN, M.D., Instructor in Medicine.

ALLAN L. FRIEDLICH, JR., M.D., Instructor in Medicine.

JOHN R. GRAHAM, M.D., Instructor in Medicine.

MORTIMER S. GREENBERG, M.D., Instructor in Medicine.

JOSEPH S. GRYBOSKI, M.D., Instructor in Medicine.

WARREN R. GUILD, M.D., Instructor in Medicine.

THOMAS C. HALL, M.D., Instructor in Medicine.

REED HARWOOD, M.D., Instructor in Medicine.

PHILIP H. HENNEMAN, M.D., Instructor in Medicine (appointment expired August 31, 1958).

ROGER B. HICKLER, M.D., Instructor in Medicine.

ROBERT B. HOLDEN, M.D., Instructor in Medicine.

JAMES H. JACKSON, M.D., Instructor in Medicine.

Bernard M. Jacobson, M.D., Instructor in Medicine.

ALAN L. KAITZ, M.D., Instructor in Medicine.

RITA M. KELLEY, M.D., Instructor in Medicine.

MELVIN I. KLAYMAN, M.D., Instructor in Medicine.

MARK F. Lesses, M.D., Instructor in Medicine.

INGA E. LINDGREN, M.D., Instructor in Medicine.

ARTHUR J. LOCKHART, M.D., Instructor in Medicine.

GEORGE W. LYNCH, M.D., Instructor in Medicine.

JAMES S. MANSFIELD, M.D., Instructor in Medicine.

L. TILLMAN McDaniel, M.D., Instructor in Medicine.

JOSEPH M. MILLER, M.D., Instructor in Medicine.

HYMAN L. NATERMAN, M.D., Instructor in Medicine.

THOMAS F. NEWCOMB, M.D., Instructor in Medicine.

Lot B. Page, M.D., Instructor in Medicine and Tutor in Medical Science.

SOLOMON PAPPER, M.D., Instructor in Medicine.

CAREY M. PETERS, M.D., Instructor in Medicine.

ARTHUR S. PIER, JR., M.D., Instructor in Medicine.

GEORGE M. PIKE, M.D., Instructor in Medicine.

WALTER W. POINT, III, M.D., Instructor in Medicine.

CURTIS PROUT, M.D., Instructor in Medicine.

HERBERT A. RAVIN, M.D., Instructor in Medicine.

ELLIOT L. SAGALL, M.D., Instructor in Medicine.

WALTER T. St. GOAR, M.D., Instructor in Medicine.

GORDON A. SAUNDERS, M.D., Instructor in Medicine.

JOHN SCHULMAN, JR., M.D., Instructor in Medicine.

HERBERT A. SELENKOW, M.D., Instructor in Medicine.

NORMAN J. SELVERSTONE, M.D., Instructor in Medicine.

JOHN T. SHARP, M.D., Instructor in Medicine.

WILLIAM J. SHRIBER, M.D., Instructor in Medicine.

WILLIAM D. SOHIER, JR., M.D., Instructor in Medicine.

NORMAN S. STEARNS, M.D., Instructor in Medicine.

HAROLD J. STEIN, M.D., Instructor in Medicine.

Myron Stein, M.D., Instructor in Medicine.

LESTER A. STEINBERG, M.D., Instructor in Medicine.

LAWRENCE I. STELLAR, M.D., Instructor in Medicine.

GEORGE P. STURGIS, M.D., Instructor in Medicine.

ROBERT H. TALKOV, M.D., Instructor in Medicine.

GARSON H. TISHKOFF, M.D., Instructor in Medicine.

Philip Troen, M.D., Instructor in Medicine.

Donald A. Tucker, M.D., Instructor in Medicine and Director of Medical Center Health Services.

WARREN E. C. WACKER, M.D., Instructor in Medicine and Tutor in Medical Science.

JOHN C. Wells, Jr., M.D., Instructor in Medicine.

OLGA S. WERMER, M.D., Instructor in Medicine.

EDWIN O. WHEELER, M.D., Instructor in Medicine.

CONGER WILLIAMS, M.D., Instructor in Medicine.

BERTRAM M. WINER, M.D., Instructor in Medicine.

RICHARD WOLFF, M.D., Instructor in Medicine.

PETER R. BALLY, M.D., Assistant in Medicine.

EDGAR D. BELL, JR., M.D., Assistant in Medicine.

WILLIAM H. BIRCHARD, M.D., Assistant in Medicine.

Buris R. Boshell, M.D., Assistant in Medicine.

ALAN S. COHEN, M.D., Assistant in Medicine.

CHARLES B. DAVIS, M.D., Assistant in Medicine.

Leslie J. DeGroot, M.D., Assistant in Medicine and Tutor in Medical Science.

ROBERT M. DONALDSON, JR., M.D., Assistant in Medicine.

MARJORIE F. ELLICOTT, M.D., Assistant in Medicine.

HELEN W. EVARTS, M.D., Assistant in Medicine.

JOEL C. GOLDTHWAIT, M.D., Assistant in Medicine.

KENNETH M. GRAHAM, M.D., Assistant in Medicine.

MICHAEL A. GRAVALLESE, JR., M.D., Assistant in Medicine.

WILLIAM L. GREEN, M.D., Assistant in Medicine.

DONALD M. HASKINS, M.D., Assistant in Medicine.

Ernest A. Higgins, Jr., M.D., Assistant in Medicine.

ERWIN O. HIRSCH, M.D., Assistant in Medicine.

ROBERT M. HOLLISTER, M.D., Assistant in Medicine.

HENRY W. JONES, JR., M.D., Assistant in Medicine.

MANUEL F. KAPLAN, M.D., Assistant in Medicine.

JOHN W. KELLER, M.D., Assistant in Medicine.

JOHN H. KNOWLES, M.D., Assistant in Medicine.

STEPHEN M. KRANE, M.D., Assistant in Medicine.

JOHN P. LEDDY, M.D., Assistant in Medicine.

JASON E. LUCAS, D.M.D., M.D., Assistant in Medicine.

Joseph E. Mackie, M.D., Assistant in Medicine.

FARAHE MALOOF, M.D., Assistant in Medicine.

EDWIN P. MAYNARD, III, M.D., Assistant in Medicine and Tutor in Medical Science.

THOMAS J. McManus, M.D., Assistant in Medicine.

WILLIAM F. McNEELY, M.D., Assistant in Medicine.

ALEXANDER M. McPhedran, M.D., Assistant in Medicine.

AVARD M. MITCHELL, Ph.D., M.D., Assistant in Medicine.

ROBERT S. MORRISON, M.D., Assistant in Medicine.

DAVID PAINE, M.D., Assistant in Medicine.

SHOLEM POSTEL, M.D., Assistant in Medicine.

EDWARD S. RENDALL, M.D., Assistant in Medicine.

WILLIAM A. RICHARDS, M.D., Assistant in Medicine.

JAMES W. SAYRE, M.D., Assistant in Medicine.

Joseph H. Schaffer, M.D., Assistant in Medicine.

RICHARD P. SCHERMAN, M.D., Assistant in Medicine.

JULIAN G. SNYDER, PH.D., M.D., Assistant in Medicine.

ROBERT C. STEWART, M.D., Assistant in Medicine.

Joseph L. Tansey, M.D., Assistant in Medicine.

JOHN M. TYLER, M.D., Assistant in Medicine.

MARY D. ALBERT, Ph.D., Research Fellow in Medicine.

DAVID W. ALLAN, M.D., Research Fellow in Medicine.

Julian T. Arabehety, M.D., Research Fellow in Medicine (appointment expired January 31, 1959).

JOSEPH T. AUGUST, M.D., Research Fellow in Medicine.

Donald W. Beaven, M.B., Ch.B., Research Fellow in Medicine (appointment expired December 31, 1958).

FRED E. Bell, Ph.D., Research Fellow in Medicine (resigned August 31, 1958).

JOHN F. BERTLES, M.D., Research Fellow in Medicine.

PAUL H. BLACK, M.D., Research Fellow in Medicine.

DAVID C. BLAIR, M.D., Research Fellow in Medicine.

Gerald P. Blanshard, M.D., Research Fellow in Medicine (appointment expired October 31, 1958).

TADEUSZ B. BOJARSKI, Ph.D., Research Fellow in Medicine.

NORMAN BRACHFELD, M.D., Research Fellow in Medicine.

PHILIP A. BROMBERG, M.D., Research Fellow in Medicine.

WILLI BURGI, M.D., Research Fellow in Medicine.

CLIVE B. CAMERON, M.B., CH.B., Research Fellow in Medicine (resigned December 31, 1958).

JOHN E. Z. CANER, M.D., Research Fellow in Medicine.

RICHARD A. CARLETON, M.D., Research Fellow in Medicine.

HERMAN E. CARR, JR., M.D., Research Fellow in Medicine.

James J. A. Cavanaugh, M.D., Research Fellow in Medicine.

GILBERT R. CHERRICK, M.D., Research Fellow in Medicine.

RODERICK W. CHILDERS, M.B., B.Ch., Research Fellow in Medicine.

JOZEF CHMIEL, M.D., Research Fellow in Medicine.

PHIN COHEN, M.D., Research Fellow in Medicine.

JOSEPH E. COLEMAN, M.D., Research Fellow in Medicine.

HELEN CZERNOBILSKY, M.D., Research Fellow in Medicine.

YVES M. DAGENAIS, M.D., Research Fellow in Medicine.

Anthony M. Dawson, M.B., B.S., Research Fellow in Medicine.

RAUL N. C. DEGASPERI, M.D., Research Fellow in Medicine (appointment expired September 30, 1958).

MARGARIDA N. DE MAGALHAES, M.D., Research Fellow in Medicine.

JØRN DITZEL, M.D., Research Fellow in Medicine.

Donald S. Dock, M.D., Research Fellow in Medicine.

Horacio A. Dolcini, M.D., Research Fellow in Medicine.

Luis A. Domenge, M.D., Research Fellow in Medicine (resigned August 31, 1958).

DANIEL D. FEDERMAN, M.D., Research Fellow in Medicine.

JEAN-PIERRE FELBER, M.D., Research Fellow in Medicine.

John H. Fessler, Ph.D., Research Fellow in Medicine (resigned August 31, 1958).

ROBERT B. FLINN, M.D., Research Fellow in Medicine.

CLAUDE E. FORKNER, JR., M.D., Research Fellow in Medicine.

STANLEY S. FRANKLIN, M.D., Research Fellow in Medicine.

HOWARD S. FRAZIER, M.D., Research Fellow in Medicine.

ELI A. FRIEDMAN, M.D., Research Fellow in Medicine.

ROBERT K. FUNKHOUSER, M.D., Research Fellow in Medicine.

Keiichiro Fuwa, Ph.D., Research Fellow in Medicine.

VALERIE A. GALTON, Ph.D., Milton Research Fellow in Medicine.

LAMONT W. GASTON, M.D., Research Fellow in Medicine.

CARMELO GIORDANO, M.D., Research Fellow in Medicine.

CHARLES J. GOODNER, M.D., Research Fellow in Medicine.

ABRAHAM Guz, M.D., Research Fellow in Medicine.

James T. Hamlin, III, M.D., Research Fellow in Medicine.

JOHN G. HARTER, M.D., Research Fellow in Medicine.

HARRY N. HAUGEN, M.D., Research Fellow in Medicine (appointment expired August 31, 1958).

RICHARD M. HAYS, M.D., Research Fellow in Medicine.

LISELOTTE I. HECHT, Ph.D., Research Fellow in Medicine.

HANS A. HIRSCH, M.D., Research Fellow in Medicine.

LEE HOFFMAN, M.D., Research Fellow in Medicine.

ROBERT G. HOSKINS, M.D., Research Fellow in Medicine.

PAUL G. HUGENHOLTZ, M.D., Research Fellow in Medicine.

Bernard Jeanrenaud, M.D., Research Fellow in Medicine.

JOHN S. JENKINS, M.D., Research Fellow in Medicine (appointment expired September 30, 1958).

JEREMIAS H. R. KAEGI, M.D., Research Fellow in Medicine.

GORDON KATZNELSON, M.D., Research Fellow in Medicine.

Francis J. Kenney, Jr., M.D., Research Fellow in Medicine.

ARTHUR KLEIN, M.D., Research Fellow in Medicine.

WILLIAM L. KRAUS, M.D., Research Fellow in Medicine.

CALVIN M. KUNIN, M.D., Research Fellow in Medicine.

MARVIN R. LAMBORG, Ph.D., Research Fellow in Medicine.

Borge Larsen, M.D., Research Fellow in Medicine.

BERNARD LEBOEUF, M.D., Research Fellow in Medicine.

CHARLES I. LEVENE, M.D., Research Fellow in Medicine.

GILBERT E. LEVINSON, M.D., Research Fellow in Medicine.

CHARLES S. LIEBER, M.D., Research Fellow in Medicine.

BARBARA LIPOWSKA, M.D., Research Fellow in Medicine.

HARRY S. LIPSCOMB, M.D., Research Fellow in Medicine.

LEROY H. MAFFLY, M.D., Research Fellow in Medicine (appointment expired August 31, 1958).

RICHARD A. MARSHALL, M.D., Research Fellow in Medicine.

CHRISTOPHER M. MARTIN, M.D., Research Fellow in Medicine.

MALCOLM M. MARTIN, M.D., Research Fellow in Medicine.

PIERRE A. MAURICE, M.D., Research Fellow in Medicine.

JEAN H. McNeil, M.S., Research Fellow in Medicine.

JAMES W. MEAKIN, M.D., C.M., Research Fellow in Medicine.

JOSEPH V. MESSER, M.D., Research Fellow in Medicine.

RICHARD S. MORGAN, M.D., Research Fellow in Medicine.

JURG MULLER, M.D., Research Fellow in Medicine (resigned September 30, 1958).

KAPPIARETH G. NAIR, M.B.B.S., Research Fellow in Medicine.

DAVID NASH, M.D., Research Fellow in Medicine.

HANS NEVINNY-STICKEL, M.D., Research Fellow in Medicine.

JOHN F. NIALL, M.D., Research Fellow in Medicine.

THOMAS NUSSBAUMER, Ph.D., Research Fellow in Medicine.

ROBERT J. OECHSLIN, M.D., Research Fellow in Medicine.

PETER OFNER, Ph.D., Research Fellow in Medicine.

JAY D. OSTROW, M.D., Research Fellow in Medicine.

ERNEST PAGE, M.D., Research Fellow in Medicine.

LIBERTO P. PECHET, M.D., Research Fellow in Medicine.

JOSEPH R. PETRANEK, M.D., Research Fellow in Medicine (appointment expired August 31, 1958).

LILLIAN POTHIER, M.D., Research Fellow in Medicine (resigned September 30, 1958).

JAMES C. PRINGLE, JR., M.D., Research Fellow in Medicine.

HUGH M. PYLE, M.D., Research Fellow in Medicine.

ERNEST G. REES, M.B., B.S., Research Fellow in Medicine.

SEARLE B. REES, M.D., Research Fellow in Medicine.

STANLEY M. REIMER, Ph.D., Research Fellow in Medicine.

JOHN B. RICHARDS, M.D., Research Fellow in Medicine.

Hugues Ryser, M.D., Research Fellow in Medicine.

Bruce J. Sams, M.D., Research Fellow in Medicine.

ELIHU M. SCHIMMEL, M.D., Research Fellow in Medicine.

Adelbert F. Schubart, M.D., Research Fellow in Medicine.

GEORGE C. SCHUSSLER, M.D., Research Fellow in Medicine.

MASAFUMI SEKI, M.D., Research Fellow in Medicine.

WILLIAM H. SHAFER, M.D., Research Fellow in Medicine.

Frank G. Silberberg, M.B., Ch.B., Research Fellow in Medicine (appointment expired March 15, 1959).

DAVID L. SINER, M.D., Research Fellow in Medicine.

Leslie F. Smith, Ph.D., Research Fellow in Medicine (resigned October 3, 1958).

PHILIP J. SNODGRASS, M.D., Research Fellow in Medicine.

ELIZABETH M. SPARROW, Ph.D., Research Fellow in Medicine.

ROBERT G. Spiro, M.D., Research Fellow in Medicine.

DOROTHY K. STEARNS, Ph.D., Research Fellow in Medicine.

SAMUEL W. STEIN, M.D., Research Fellow in Medicine.

MARY L. STEPHENSON, Ph.D., Research Fellow in Medicine.

Anne M. Stoffyn, Ph.D., Research Fellow in Medicine.

JOHN B. STOKES, M.B., B.S., Research Fellow in Medicine (appointment expired December 31, 1958).

Zofia Tarasiejska, Ph.D., Research Fellow in Medicine.

DAVID M. TRAVIS, M.D., Research Fellow in Medicine (resigned September 30, 1958).

JOHN D. TURNER, M.D.C.M., Research Fellow in Medicine.

DAVID D. ULMER, M.D., Research Fellow in Medicine.

ADELINA VILELA, M.D., Research Fellow in Medicine.

JAMES E. C. WALKER, M.D., Research Fellow in Medicine.

Guillermo Whittembury, M.D., Research Fellow in Medicine.

ROBERT G. WILLOCX, M.D., Research Fellow in Medicine.

Francis C. Wood, Jr., M.D., Research Fellow in Medicine.

EDWARD WOODWARD, JR., M.D., Research Fellow in Medicine.

STANLEY YACHNIN, M.D., Research Fellow in Medicine.

GASTON ZAHND, M.D., Research Fellow in Medicine.

ISIDORO ZAIDMAN, M.D., Research Fellow in Medicine.

Donald P. Zangwill, M.D., Research Fellow in Medicine.

JACK H. HALL, M.D., Teaching Fellow in Medicine.

CHARLES S. KEEVIL, JR., M.D., Teaching Fellow in Medicine.

Bernard R. Landau, Ph.D., M.D., Teaching Fellow in Medicine and Tutor in Medical Science.

JOHN K. LEACH, M.D., Teaching Fellow in Medicine.

ROBERT J. MATTHEWS, M.D., Teaching Fellow in Medicine.

CHARLES A. SANDERS, M.D., Teaching Fellow in Medicine.

OSCAR E. STAROBIN, M.D., Teaching Fellow in Medicine.

ELLIOTT W. STRAUSS, M.D., Teaching Fellow in Medicine.

# Affiliated:

NEIL L. CRONE, M.D., Professor of Business Administration and Director of the Business School Health Service.

- Dana L. Farnsworth, M.D., Henry K. Oliver Professor of Hygiene and Director of University Health Services.
- Lewis, L. Engel, Ph.D., Associate Professor of Biological Chemistry.
- HARRIET L. HARDY, M.D., Associate Clinical Professor of Preventive Medicine.
- Edward H. Kass, Ph.D., M.D., Associate Professor of Bacteriology and Immunology.
- Anthony F. Bartholomay, Ph.D., Assistant Professor of Mathematical Biology, Department of Biostatistics, S.P.H.
- Benedict F. Massell, M.D., Assistant Clinical Professor of Pediatrics.
- JESSE F. Scott, M.D., Assistant Professor of Anatomy.
- Edgar B. Taft, M.D., Assistant Professor of Pathology at the Massachusetts General Hospital.
- THEODORE B. VAN ITALLIE, M.D., Assistant Professor of Clinical Nutrition, S.P.H.
- EDWARD A. GAENSLER, M.D., Clinical Associate in Surgery.
- Joseph Stokes, 3D, M.D., Associate in Preventive Medicine.
- BENJAMIN J. MURAWSKI, Ph.D., Research Associate in Psychology in the Department of Medicine.
- W. RICHARD BURACK, M.D., Research Fellow in Pharmacology.
- Monto Ho, M.D., Research Fellow in Bacteriology and Immunology.

## REQUIRED COURSES

The instruction given by the Department of Medicine consists of lectures, recitations, amphitheatre clinics, practical work in the outpatient departments and wards of the hospitals, and participation in the course in pathologic physiology, which is given at the Harvard Medical School. Throughout, an effort is made to correlate the clinical aspects of patients with fundamental principles derived from the basic sciences and to establish in the student's mind the impor-

tance of care and precision in diagnostic and therapeutic methods. The time given to the Department of Medicine begins in the first half of the second year and continues throughout the third and fourth years of the medical curriculum.

Medicine A. Second Year. — During the first half of the second year introductory aspects of internal medicine are covered in a program of lectures and demonstrations in methods of physical diagnosis. During the second half of the second year a correlated program in pathologic physiology is given, in which mechanisms of disease and methods of physical and laboratory diagnosis are taught by the Department of Medicine in collaboration with the Departments of Neurology, Obstetrics, Pathology, Pediatrics, Pharmacology, Preventive Medicine, Psychiatry, Radiology, Surgery, and Tropical Public Health. The application of the subject matter of preclinical courses to disease states is emphasized. For their practical instruction in history taking and physical examination, the students are divided into small groups assigned to the various hospitals.

MEDICINE B. Third Year. — Throughout the third year the subjects of internal medicine are covered by clinics or lectures for the whole class, which are given at the various hospitals or at the Harvard Medical School. For their practical instruction the students are divided into small groups and work in the medical wards or outpatient departments of the four larger hospitals connected with the Medical School. On Monday and Wednesday afternoons the third of the class assigned to Medicine attends amphitheatre clinics, clinical-pathological conferences, and X-ray conferences in rotation at the various hospitals. One week of the course is spent at the Middlesex County Sanatorium for special instruction in tuberculosis and other chest diseases.

MEDICINE C. Fourth Year. — In this year for two or three months the students serve mainly as clinical clerks in the medical wards of a general hospital. Part of their time, however, is devoted to acting as assistants in the medical clinic of the out-patient department. Especial emphasis is placed upon the care of the patient as an individual with respect to diagnosis and treatment. With individual variations in the different hospitals, conferences are held for the informal discussion of clinical, pathological, immunological, radiological, social or dietetic problems of selected cases.

## ELECTIVE AND VOLUNTARY COURSES

In addition to the required courses for fourth year students the department offers several opportunities for specially qualified students to take advanced elective courses and to carry on research problems in internal medicine.

### FACILITIES FOR INSTRUCTION

The instruction is given at the Harvard Medical School, the Massachusetts General Hospital, the Boston City Hospital, the Peter Bent Brigham Hospital, the Beth Israel Hospital and several other hospitals devoted to special purposes. In these hospitals abundant and varied clinical material is available for the conduct of numerous exercises.

#### SECOND YEAR

**HOURS** 

Pathologic physiology, including lectures and demonstrations in methods of physical and laboratory diagnosis. Drs. Kass, Bigelow, Chapman, and Renold, together with representatives of the collaborating departments. Six half-days during the first semester, and eight half-days per week during the second semester.

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#### THIRD YEAR

**HOURS** 

Lectures, recitations, and clinics on selected topics in internal medicine. Drs. Bauer, Blumgart, Castle, Thorn, Zameonik and Associates. Throughout the year.

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Exercises in sections in the wards and out-patient departments at the M.G.H., B.C.H., P.B.B.H., and B.I.H. Each section has thirty-two exercises of two and a half hours each and twenty-one exercises of three hours each.

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#### FOURTH YEAR

**HOURS** 

Clinical Clerkships at M.G.H. (Medicine C1, Dr. BAUER, and Associates); B.C.H. (Medicine C2, Drs. Castle, Davidson and Associates); P.B.B.H. (Medicine C3, Dr. Thorn and Associates); B.I.H. (Medicine C4, Drs. Blumgart, Alexander, Freedberg and Associates).

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### FOURTH YEAR ELECTIVE COURSES

- 5. Advanced Medicine. Drs. Bauer, Bland, Smith, Isselbacher, Beck, Leaf, Stanbury, Watkins and Associates. M.G.H.
- 6. Advanced Medicine. Drs. Castle, Badger, Bigelow, Davidson, Ellis, Finland, Hurwitz, Ingbar, Kass and Associates. B.C.H.
- 7. Advanced Medicine. Drs. Thorn, Burwell, Gardner, Gray, Levine, Merrill, Vallee and Associates. P.B.B.H.
- 8. Advanced Medicine. Drs. Blumgart, Alexander, Freedberg, Zoll, Wessler, Hamolsky, Troen, Hiatt, and Associates. B.I.H.
- 9. Diabetes. Dr. Root and Associates. N.E.D.H.
- 10. Neoplastic Disease. Drs. Zamecnik, Castleman, Churchill, Robbins and Associates. M.G.H.
- 11. Physical Medicine and Rehabilitation. Dr. WATKINS. M.G.H.
- 12. Diseases of the Lungs. Dr. BADGER and Associates. M.G.H., B.C.H., P.B.B.H. and C.M.C.
- 14. Advanced Medicine. Drs. Warthin, Littman and Associates. W.R.V.A.H.
- 15. Comprehensive Medical Care. Dr. Farnsworth and Associates of University Health Services of Harvard University and Radcliffe College. Harvard Hygiene Department.
- 16. Chronic Diseases. Dr. Chalmers and Associates. Lemuel Shattuck Hospital.

## VOLUNTARY COURSES

- 31. Clinics on Digestive Diseases. Drs. Banks and Zetzel. Wednesdays, 2.00 to 4.00 p.m., February and March, B.I.H. Open to third year students.
- 37. Diagnosis and Treatment of Heart Diseases. Drs. RISEMAN, WESSLER, ALTSCHULE and SAGALL. Wednesdays, 2:00-4:00 p.m., February and March. Open to third and fourth year students.
- 38. Diagnosis and Treatment of Diabetes Mellitus. Drs. Beaser and Stearns. Wednesdays, 2.00 to 3.30 p.m., April 1 through May 1. Open to third year students.
- 39. Electrocardiography. Dr. H. D. LEVINE. Wednesdays, 4.00 to 5.30 p.m., October and November, P.B.B.H. Open to third and fourth year students.
- 43. Diabetes Mellitus. Drs. Marble, Renold and Associates. Tuesdays and Thursdays, 2.00 to 3.30 p.m., March. Open to second, third and fourth year students.

44. Seminars on the Biology and Biochemistry of Disease. Drs. J. Gross, Batchelor, R. B. Cohen, Beck, Calkins, Isselbacher, L. H. Smith, Swartz and Waksman. Day to be arranged in February, March, and April. Two hour seminars for ten weeks. Open to second, third and fourth year students.

45. Selected Topics in Endocrinology. Drs. HAMOLSKY, HIATT and

Troen. Will not be offered in 1958-59.

## **Dermatology**

MAURICE M. TOLMAN, M.D., Assistant Clinical Professor of Dermatology and Acting Head of the Department.

Walter F. Lever, M.D., Assistant Clinical Professor of Dermatol-

ogy.

IRVIN H. BLANK, Ph.D., Associate in Dermatology at the Massachusetts General Hospital.

ROBERT D. GRIESEMER, M.D., Associate in Dermatology at the Massachusetts General Hospital.

JOHN ADAMS, JR., M.D., Instructor in Dermatology.

WILLIAM R. HILL, M.D., Instructor in Dermatology.

ROBERT F. TILLEY, M.D., Instructor in Dermatology.

EARL A. GLICKLICH, M.D., Assistant in Dermatology.

MILTON E. HELMAN, M.D., Assistant in Dermatology.

CHARLES S. KEUPER, M.D., Assistant in Dermatology.

Myron H. Matz, M.D., Assistant in Dermatology. Philip L. McCarthy, M.D., Assistant in Dermatology.

Sabino J. Sinesi, M.D., Assistant in Dermatolgy.

ARTHUR S. SPANGLER, M.D., Assistant in Dermatology.

Bronius Baskys, M.A., Research Fellow in Dermatology.

LASZLO L. FEKETE, M.D., Research Fellow in Dermatology.

RUTH K. FREINKEL, M.D., Research Fellow in Dermatology.

EDMUND KLEIN, M.D., Teaching Fellow in Dermatology.

# REQUIRED COURSES

Dermatology A. Third Year. — Six lectures are given in the fundamentals of dermatology. The object is to present the essential principles underlying the production of cutaneous abnormalities and to identify and relate these changes, both functional and structural,

to the processes of disease in general. The subject is considered not as an isolated area of medicine, but as an integral part of medicine itself. It is hoped that through this method of study the student may come to understand the unity of the individual in his response to the various pathogenic forces of nature.

The student serves also as a clerk in the out-patient clinic, where he studies and discusses with the staff, patients assigned to him. Emphasis is placed upon history-taking and physical examination of patients in such a way as to make the student aware that the diseases which he observes require, in general, the techniques of clinical medicine for their study and interpretation. Rational methods of treatment are insisted upon.

The students, in sections, attend morning ward rounds.

#### THIRD YEAR

HOURS

Lectures. Dr. Tolman and Associates. H.M.S. Six lectures. 6
Section work. Clinical Dermatology. Dr. Tolman and Associates. M.G.H. Each student attends ten or eleven sessions (clinics and ward rounds) of three hours each. 32

## FOURTH YEAR ELECTIVE COURSE

1. Clinical Clerkship. Dr. Tolman and Associates. M.G.H. Whole course, all day, or half-course, mornings, with permission of the head of the department. Limited to six students each month.

## **Neurology and Psychiatry**

RAYMOND D. ADAMS, M.D., Bullard Professor of Neuropathology and Head of the Department of Neurology at the Massachusetts General Hospital.

DEREK E. DENNY-BROWN, DR. PHIL., M.D., A.M. (hon.), James Jackson Putnam Professor of Neurology and Head of the Department at the Boston City Hospital and Chairman of the Executive Committee of the Departments of Neurology and Psychiatry.

JACK R. EWALT, M.D., A.M. (hon.), Professor of Psychiatry and Head of the Department at the Massachusetts Mental Health Center.

- ERICH LINDEMANN, Ph.D., M.D., Professor of Psychiatry and Head of the Department at the Massachusetts General Hospital.
- GEORGE E. GARDNER, Ph.D., M.D., Clinical Professor of Psychiatry.
- IVES HENDRICK, M.D., Clinical Professor of Psychiatry.
- PAUL I. YAKOVLEV, M.D., Clinical Professor of Neuropathology and Curator of the Warren Anatomical Museum.
- Grete L. Bibring, M.D., Associate Clinical Professor of Psychiatry.
- HENRY M. Fox, M.D., Associate Clinical Professor of Psychiatry.
- MILTON GREENBLATT, M.D., Associate Clinical Professor of Psychiatry.
- ALFRED POPE, M.D., Associate Professor of Neuropathology at the McLean Hospital.
- ELVIN V. SEMRAD, M.D., Associate Clinical Professor of Psychiatry.
- JOHN P. SPIEGEL, M.D., Associate Clinical Professor of Psychiatry.
- Alfred H. Stanton, M.D., Associate Professor of Psychiatry at the McLean Hospital.
- CHARLES M. FISHER, M.D., Assistant Clinical Professor of Neurology.
- Joseph M. Foley, M.D., Assistant Professor of Neurology.
- Gregory Rochlin, M.D., Assistant Clinical Professor of Psychiatry.
- ROBERT S. SCHWAB, M.D., Assistant Clinical Professor of Neurology.
- PHILIP SOLOMON, M.D., Assistant Clinical Professor of Psychiatry.
- ELIZABETH R. ZETZEL, M.D., Assistant Clinical Professor of Psychiatry.
- ROBERT N. WILSON, Ph.D., Lecturer on Sociology in the Department of Psychiatry.
- HAROLD S. ALBERT, M.D., C.M., Clinical Associate in Psychiatry.
- LEO BERMAN, M.D., Clinical Associate in Psychiatry.
- MADELAINE R. Brown, M.D., Clinical Associate in Neurology.
- EDWIN M. COLE, M.D., Clinical Associate in Neurology.

GAYLORD P. COON, M.D., Clinical Associate in Psychiatry.

Frank C. D'Elseaux, M.D., Clinical Associate in Psychiatry.

PHILIP R. Dodge, M.D., Associate in Neurology at the Massachusetts General Hospital.

THOMAS F. DWYER, M.D., Clinical Associate in Psychiatry.

STANLEY H. ELDRED, M.D., Associate in Psychiatry at the McLean Hospital.

Daniel H. Funkenstein, M.D., Clinical Associate in Psychiatry.

SANFORD R. GIFFORD, Jr., M.D., Associate in Psychiatry.

LESTER L. HASENBUSH, M.D., Clinical Associate in Psychiatry.

HARRY L. KOZOL, M.D., Clinical Associate in Neurology.

ROBERT H. McCarter, M.D., Clinical Associate in Psychiatry.

Doris Menzer-Benaron, M.D., Clinical Associate in Psychiatry.

JOSEPH J. MICHAELS, M.D., Clinical Associate in Psychiatry.

WILLIAM F. MURPHY, M.D., Clinical Associate in Psychiatry.

JOHN C. NEMIAH, M.D., Associate in Psychiatry.

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WILLIAM H. TIMBERLAKE, M.D., Clinical Associate in Neurology.

LAURENCE D. TREVETT, M.D., Clinical Associate in Psychiatry.

LUTFU L. UZMAN, M.D., Associate in Neurology.

ARTHUR F. VALENSTEIN, M.D., Clinical Associate in Psychiatry.

MAURICE VICTOR, M.D., Clinical Associate in Neurology.

AVERY D. WEISMAN, M.D., Clinical Associate in Psychiatry.

HENRY WERMER, M.D., Clinical Associate in Psychiatry.

ROBERT S. ALBERT, Ph.D., Research Associate in Psychology in the Department of Psychiatry.

MARY A. B. Brazier, Ph.D., Research Associate in Neurology.

- WILLIAM A. CAUDILL, Ph.D., Research Associate in Anthropology in the Department of Psychiatry.
- EUGENE A. COGAN, Ph.D., Research Associate in Psychology in the Department of Psychiatry.
- RAY H. ELLING, Ph.D., Research Associate in Sociology in the Department of Psychiatry.
- John M. von Felsinger, Ph.D., Research Associate in Psychology in the Department of Psychiatry.
- Humberto Fernandez-Moran, M.D., Ph.D., Research Associate in Neuropathology.
- MARC A. FRIED, Ph.D., Research Associate in Psychology in the Department of Psychiatry.
- DONALD KLEIN, Ph.D., Research Associate in Psychology in the Department of Psychiatry.
- PHILIP E. KUBZANSKY, Ph.D., Research Associate in Psychology in the Department of Psychiatry.
- DAVID LANDY, Ph.D., Research Associate in Anthropology in the Department of Psychiatry.
- GLORIA F. LEIDERMAN, Ph.D., Research Associate in Psychology in the Department of Psychiatry.
- DANIEL J. LEVINSON, Ph.D., Research Associate in Social Science and Psychiatry.
- ROBERT J. LIFTON, M.D., Research Associate in Psychiatry.
- OGDEN R. LINDSLEY, S.M., Research Associate in Psychiatry.
- EDWARD J. PALMER, M.D., Research Associate in Neurology.
- Asenath Petrie, Ph.D., Research Associate in Psychology in the Department of Psychiatry.
- IRENE R. PIERCE, Ph.D., Research Associate in Psychology in the Department of Psychiatry.
- ROLAND A. RODDA, M.D., Research Associate in Neurology (appointment expired March 31, 1959).
- BERNARD G. ROSENTHAL, Ph.D., Research Associate in Psychology in the Department of Psychiatry.
- Ann D. Salmon, Ph.D., Research Associate in Psychology in the Department of Psychiatry.
- JUDITH A. SCHOELLKOPF, Ph.D., Research Associate in Psychiatry.

Morris S. Schwartz, Ph.D., Research Associate in Sociology in the Department of Psychiatry.

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IRVING WOLF, Ph.D., Research Associate in Psychology in the Department of Psychiatry.

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Myer Asekoff, M.D., Instructor in Psychiatry.

CHARLES R. ATWELL, A.M., Instructor in Psychology in the Department of Psychiatry.

BETTY Q. BANKER, M.D., Instructor in Neuropathology.

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TULLY BENARON, M.D., Instructor in Psychiatry.

CLEMENS E. BENDA, M.D., Instructor in Psychiatry.

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ERIK GLUD, M.D., Instructor in Psychiatry.

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MARIA LORENZ, M.D., Instructor in Psychiatry.

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LESTER GRINSPOON, M.D., Teaching Fellow in Psychiatry.
BARBARA C. GURD, M.D., Teaching Fellow in Psychiatry. JOHN H. HART, M.D., Teaching Fellow in Psychiatry. JAMES N. HAYWARD, M.D., Teaching Fellow in Neurology. Ronnee I. Herrmann, M.D., Teaching Fellow in Psychiatry. DAVID M. HOLMES, M.D., Teaching Fellow in Psychiatry. CHEN-CHIN HSU, M.D., Teaching Fellow in Psychiatry. Peter B. Jenney, M.D., Teaching Fellow in Psychiatry. ALVAN B. JUDD, M.D., Teaching Fellow in Psychiatry. WILLIAM E. KARNES, M.D., Teaching Fellow in Neuropathology.

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ELINOR MEISS, M.D., Teaching Fellow in Psychiatry.

EMANUEL MIREL, M.D., Teaching Fellow in Psychiatry.

NEWMAN S. MITTEL, M.D., Teaching Fellow in Psychiatry.

CHARLES E. MORRIS, M.D., Teaching Fellow in Neurology.

Hugo W. Moser, M.D., Teaching Fellow in Neurology.

EGBERT H. MUELLER, M.D., Teaching Fellow in Psychiatry.

CHARLES W. NEVILLE, JR., M.D., Teaching Fellow in Psychiatry.

HARRY S. OLIN, M.D., Teaching Fellow in Psychiatry.

MARTIN T. ORNE, M.D., Teaching Fellow in Psychiatry.

VARDA PELLER-GANZ, M.D., Teaching Fellow in Psychiatry.

JAMES K. PENRY, M.D., Teaching Fellow in Neurology.

GEORGE M. PERRIN, M.D., Teaching Fellow in Psychiatry.

JALNA A. PERRY, M.D., Teaching Fellow in Psychiatry.

FERNAND POIRIER, M.D., Teaching Fellow in Neurology (appointment expires December 31, 1958).

DAVID C. POSKANZER, M.D., Teaching Fellow in Neurology.

Donald J. Reis, M.D., Teaching Fellow in Neurology.

JACK O. RICE, M.D., Teaching Fellow in Psychiatry.

AMES ROBEY, M.D., Teaching Fellow in Psychiatry.

PHELPS ROBINSON, M.D., Teaching Fellow in Psychiatry.

Bal M. Sahay, M.D., Teaching Fellow in Psychiatry.

Harry L. Senger, Jr., M.D., Teaching Fellow in Psychiatry.

Arthur K. Shapiro, M.D., Teaching Fellow in Psychiatry.

Charles S. Sheldon, M.B., D.P.M., Teaching Fellow in Psychiatry.

WILLIAM R. SHELTON, M.D., Teaching Fellow in Psychiatry. Julius Silberger, Jr., M.D., Teaching Fellow in Psychiatry. Robert L. Smith, M.D., Teaching Fellow in Psychiatry. John E. Snell, M.D., Teaching Fellow in Psychiatry. Arnold Starr, M.D., Teaching Fellow in Neurology. Joseph P. Van der Meulen, M.D., Teaching Fellow in Neurology.

STANLEY VAN DEN NOORT, M.D., Teaching Fellow in Neurology. IVAN T. VASEY, M.D., Teaching Fellow in Psychiatry. STANLEY WALZER, M.D., Teaching Fellow in Psychiatry. RICHARD V. WILSON, M.D., Teaching Fellow in Psychiatry. HERBERT C. WIMBERGER, M.D., Teaching Fellow in Psychiatry. GERALD F. WINKLER, M.D., Teaching Fellow in Neurology. Anna K. Wolff, M.D., Teaching Fellow in Psychiatry. Carl T. Wolff, M.D., Teaching Fellow in Psychiatry. Marian Woolston, M.D., Teaching Fellow in Psychiatry. Allan W. Wright, M.D., Teaching Fellow in Neurology. Irving Zieper, M.D., Teaching Fellow in Neurology.

Affiliated:

RANDOLPH K. BYERS, M.D., Assistant Clinical Professor of Pediatrics.

# Neurology

# REQUIRED COURSES

NEUROLOGY A. Second Year. — Clinical lectures are given at the Boston City and Massachusetts General Hospitals to the entire class. The object of the course is to give the student a general knowledge of the principles of diagnosis of diseases of the nervous system as a preparation for later work.

NEUROLOGY B. Third Year. — Clinical lectures are given in the third year at the Boston City and the Massachusetts General Hospitals. This course is to cover differential diagnosis and the principles of treatment. The members of the class are also required to work in the neurological service at the B.C.H. or M.G.H. in sections during the year. For this work the more didactic teaching of the second year serves as a necessary preparation. The work is practical in character and serves to bring the student into immediate contact with patients.

## SECOND YEAR

**HOURS** 

14

Clinical lectures. Dr. Denny-Brown, B.C.H. and Dr. Adams, M.G.H.

#### THIRD YEAR

Clinical lectures. Dr. Denny-Brown, B.C.H. and Dr. Adams, M.G.H. Last eight Saturdays in first half-year. 12
Section teaching. B.C.H. and M.G.H. Each student attends ten or eleven two and a half-hour exercises in neurology. 27

# FOURTH YEAR ELECTIVE COURSES

- 1. Neurology. Dr. Denny-Brown, B.C.H. Whole course (clerkship), all day.
- 2. Neurology. Dr. Adams, M.G.H. Whole course (clerkship), all day. Each course limited to two students each month.
- 3. Pediatric Neurology. Dr. Byers and Associates. C.M.C. Whole course all day. (Same course as Pediatrics 3f.)
- 4. Pediatric Neurology. Drs. Dodge, Adams and Associates. M.G.H. Whole course, all day. (Same course as Pediatrics 4c.)

# Neuropathology

# REQUIRED COURSE

Neuropathology A. Second Year. — The course consists of lectures, laboratory work, and demonstrations, amounting to fifty-four hours. The lectures introduce conceptions of value for the third year courses in neurology and psychiatry and for the neurological parts of courses in internal medicine and in surgery. Microscopical and gross specimens are studied.

#### SECOND YEAR

**HOURS** 

Lectures and laboratory work. Dr. Adams and Staff. Four times a week, for four and one-half weeks.

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# FOURTH YEAR ELECTIVE COURSE

20. Laboratory work. Opportunities for research are available at the laboratories of the M.G.H., B.C.H., and H.M.S. Time and instructor to be arranged with Drs. Adams or Denny-Brown.

# **Psychiatry**

# REQUIRED COURSES

First and Second Year: — The course titled Growth and Development (described on page 82) embraces and integrates with the first two years of required course in Psychiatry.

Psychiatry A. First Year. — Normal Growth and Development. 24 lectures, 4 discussion sessions, and 1 laboratory period. Introduction to the development of the human personality. The course reviews the understanding of the human being, whether sick or well, and the foundation is laid for the more advanced course in psychopathology. The lectures deal with the development of the human personality in the setting of the family and the culture from infancy through childhood and adolescence to maturity and aging. Emphasis is laid upon the adjustment of normal personality types to various crises situations, the influence of anxiety and the significance of unconscious forces. Members of the psychiatric staff participate in the clinics designed to relate material of their course in the first year to problems of human development and variation.

PSYCHIATRY B. Second Year. — The second year consists of 20 lectures in abnormal growth and development to develop further concepts of psychological functioning. Emphasis shifts to the nature and genesis of abnormal psychological mechanisms which result from individual, social and physical factors and are manifested in symptoms and behavioral disturbances. Four additional hours are given to introduce methods of history-taking and examination of patients designed to understand more fully socio-emotional factors in illness. The course includes lectures and clinical instruction in sections of four students on

wards of the general hospitals. It is designed to serve as a preparation for the third year when the student will have direct contact with patients on hospital wards. Four three-hour sections are given in cooperation with physical diagnosis. Members of the Psychiatry Department participate in laboratory periods organized for the study of organ systems as part of the integrated teaching program.

PSYCHIATRY C. Third Year. — The class is divided into small sections for the clinical study of patients. Each student studies individual cases in the wards of the Massachusetts Mental Health Center. During the second-half year, clinical lectures are given once a week at the Massachusetts Mental Health Center. The most important varieties of mental disorder are presented with emphasis upon early recognition of mental disease and methods of treatment.

PSYCHIATRY D. Fourth Year. — Each student serves as a clinical clerk for one month at the Massachusetts Mental Health Center, the Massachusetts General Hospital, or the McLean Hospital in conjunction with the Beth Israel Hospital, for out-patient work. Work with in-patients consists of the study of patients with various types of mental disorder and their treatment. The study and treatment of patients, with emphasis on the applications of psychiatry to general medical practice is given by the Harvard Teaching Unit of the Massachusetts Mental Health Center and the out-patient departments of the Massachusetts General and Beth Israel Hospitals. The psychiatric problems of children are discussed by staff members of the Judge Baker Foundation at the Children's Hospital, and by those associated with the M.M.H.C., M.G.H., and B.I.H.

#### FIRST YEAR

**HOURS** 

PSYCHIATRY A. Lectures and discussion groups. Drs. LINDEMANN, GARDNER, BIBRING and Associates. Dr. GARDNER QUARTON coordinator for course in Growth and Development.

30

#### SECOND YEAR

PSYCHIATRY B. Lectures and section teaching. Drs. LINDEMANN, BIBRING and Associates. Dr. John Nemiah coordinator for course in Abnormal Growth and Development. In addition to twenty-two lectures, each student attends four three-hour exercises as part of the course in physical diagnosis.

12

22

#### THIRD YEAR

**HOURS** 

Psychiatry C. Lectures and section teaching. Dr. Semrad and Associates. M.M.H.C. Each student attends at least ten three-hour exercises.

44

#### FOURTH YEAR

PSYCHIATRY D. Clinical Clerkship. Dr. HENDRICK and Associates at the hospitals concerned: D1-M.M.H.C., D2-M.G.H., D3-McL.H.

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# FOURTH YEAR ELECTIVE COURSES (Offered monthly throughout the year.)

# Adult Psychiatry

- 4. Dr. HENDRICK and Associates. M.M.H.C.
- 5. Dr. LINDEMANN and Associates. M.G.H.
- 6. Dr. Stanton and Associates. McL.H.
- 7. Dr. Bibring and Associates. B.I.H.

# Child Psychiatry

- 8. Dr. Rochlin and Associates. M.M.H.C.
- 9. Dr. Blom and Associates. M.G.H. (same course as Pediatrics 5)
- 10. Dr. BIBRING and Associates. B.I.H.
- 11. Dr. GARDNER and Associates. C.M.C.

# **Ophthalmology**

- EDWIN B. DUNPHY, M.D., Henry Willard Williams Professor of Ophthalmology at the Massachusetts Eye and Ear Infirmary and Head of the Department.
- DAVID G. COGAN, M.D., Professor of Ophthalmology and Director of the Howe Laboratory of Ophthalmology.
- PAUL A. CHANDLER, M.D., D.S. (hon.), Associate Clinical Professor of Ophthalmology.
- HENRY F. ALLEN, M.D., Assistant Clinical Professor of Ophthal-mology.
- WILLIAM P. BEETHAM, M.D., Assistant Clinical Professor of Ophthalmology.

VIRGIL G. CASTEN, M.D., Assistant Clinical Professor of Ophthalmology.

PAUL BOEDER, Ph.D., Lecturer on Ophthalmology.

Brendan D. Leahey, M.D., Clinical Associate in Ophthalmology. Charles L. Schepens, M.D., Clinical Associate in Ophthalmology.

Albert E. Sloane, M.D., Clinical Associate in Ophthalmology.

GARRETT L. SULLIVAN, JR., M.D., Clinical Associate in Ophthalmology.

ENDRE A. BALAZS, M.D., Lecturer on Ophthalmology.

Russell L. Carpenter, Ph.D., Lecturer on Ophthalmology.

TRYGVE GUNDERSEN, M.D., Lecturer on Ophthalmology.

Marie A. Jakus, Ph.D., Lecturer on Ophthalmology.

ALGERNON B. REESE, M.D., Visiting Lecturer on Ophthalmology, Harvard Medical School; Ophthalmologist-in-Chief *Pro Tempore*, Massachusetts Eye and Ear Infirmary (April 13–19, 1959).

LEONA R. ZACHARIAS, Ph.D., Lecturer on Ophthalmology.

HARRY E. BRACONIER, M.D., Instructor in Ophthalmology.

THOMAS J. CAVANAUGH, M.D., C.M., Instructor in Ophthalmology.

JULIAN F. CHISHOLM, JR., M.D., Instructor in Ophthalmology.

Joseph M. Clough, M.D., Instructor in Ophthalmology.

Mahlon T. Easton, M.D., Instructor in Ophthalmology.

SIDNEY FUTTERMAN, Ph.D., Instructor in Ophthalmology.

CARL C. Johnson, M.D., Instructor in Ophthalmology.

SUMNER D. LIEBMAN, M.D., Instructor in Ophthalmology.

HENRY A. Mosher, M.D., Instructor in Ophthalmology.

RICHARD B. PIPPITT, M.D., Instructor in Ophthalmology.

ABRAHAM POLLEN, M.D., Instructor in Ophthalmology.

Earl S. Seale, M.D., Instructor in Ophthalmology.

TAYLOR R. SMITH, M.D., Instructor in Ophthalmology.

ROBERT R. TROTTER, M.D., Instructor in Ophthalmology.

ROBERT J. BROCKHURST, M.D., Assistant in Ophthalmology.

RICHARD B. CHAPMAN, M.D., Assistant in Ophthalomology.

THOMAS P. CRONIN, M.D., Assistant in Ophthalmology.

ROBERT J. HERM, M.D., Assistant in Ophthalmology. John M. Hill, M.D., Assistant in Ophthalmology.

CHARLES D. J. REGAN, M.D., Assistant in Ophthalmology. KARL RIEMER, M.D., Assistant in Ophthalmology. BARUCH J. SACHS, M.D., Assistant in Ophthalmology. ALFRED W. Scott, M.D., Assistant in Ophthalmology.

IRVIN S. TAYLOR, M.D., Assistant in Ophthalmology.

Francis J. West, M.D., Assistant in Ophthalmology.

STANLEY HERSH, M.D., Research Fellow in Ophthalmology (appointment expired September 30, 1958).

EDWARD C. SWEEBE, M.D., Teaching Fellow in Ophthalmology.

# REQUIRED COURSES

First Year. - Lecture in anatomy and physiology of the eye. Second Year. - Lecture in pathology and pharmacology of the eye. Third Year. - Instruction in clinical ophthalmology.

THIRD YEAR HOURS Thirteen clinical exercises. M.E.E.I. 35 Lectures on clinical ophthalmology. H.M.S., second half-year. 5

# FOURTH YEAR ELECTIVE COURSE

1. Clinical Ophthalmology. Drs. Dunphy, Chandler, Cogan and Associates. M.E.E.I. Whole course, all day.

# Howe Laboratory of Ophthalmology

DAVID G. COGAN, M.D., Professor of Ophthalmology and Director of the Howe Laboratory of Ophthalmology.

W. Morton Grant, M.D., Associate Professor of Ophthalmology at the Massachusetts Eye and Ear Infirmary.

JIN H. KINOSHITA, Ph.D., Assistant Professor of Biological Chemistry at the Howe Laboratory of Ophthalmology.

DAVID D. DONALDSON, M.D., Associate in Ophthalmology. Toichiro Kuwabara, M.D., Associate in Ophthalmology.

JOHN S. ANDREWS, JR., PH.D., Instructor in Ophthalmology.

HAROLD L. KERN, PH.D., Instructor in Ophthalmic Research.

EUGENE C. CICCARELLI, M.D., Research Fellow in Ophthalmology.

CARL KUPFER, M.D., Research Fellow in Ophthalmology.

ROBERT D. REINECKE, O.D., Research Fellow in Ophthalmology, (appointment expired August 31, 1958).

Joseph L. Smith, M.D., Research Fellow in Ophthalmology.

The Howe Laboratory of Ophthalmology was founded in 1927 by the late Dr. Lucien Howe. A sum of money equal to that initially given by Dr. Howe was donated by the Rockefeller Foundation. Laboratory space was provided by the Massachusetts Eye and Ear Infirmary.

The purpose of the Laboratory is to advance ophthalmology; its researches are not restricted to any particular phase of this science. Advantage is taken of the rich clinical material of the Infirmary. While the Laboratory is purely an institution for research, the services of the various members of the staff are available for teaching in the Harvard Medical School and for assistance in the clinical work of the Infirmary.

# Radiology

Felix G. Fleischner, M.D., Clinical Professor of Radiology.

EDWARD B. D. NEUHAUSER, M.D., Associate Clinical Professor of Radiology.

LAURENCE L. ROBBINS, M.D., Associate Clinical Professor of Radiology.

JAMES B. DEALY, JR., M.D., Assistant Clinical Professor of Radiology and Acting Head of the Department.

MAX RITVO, M.D., Assistant Clinical Professor of Radiology.

MILFORD D. SCHULZ, M.D., Assistant Clinical Professor of Radiology.

MARTIN H. WITTENBORG, M.D., Assistant Clinical Professor of Radiology.

STANLEY M. WYMAN, M.D., Assistant Clinical Professor of Radiology.

ALEXANDER S. MACMILLAN, M.D., Clinical Associate in Radiology.

JOSEPH H. MARKS, M.D., Clinical Associate in Radiology.

RICHARD SCHATZKI, M.D., Clinical Associate in Radiology.

IRVING A. SHAUFFER, M.D., Clinical Associate in Radiology.

Guilo J. D'Angio, M.D., Instructor in Radiology.

JOHN E. GARY, M.D., Instructor in Radiology.

GEORGE B. C. HARRIS, M.D., Instructor in Radiology.

EDWARD J. HEALEY, M.D., Instructor in Radiology (died December 15, 1958).

Ernest M. Henken, M.D., Instructor in Radiology.

ROBERT G. MOFFAT, M.D., Instructor in Radiology.

JOHN D. REEVES, JR., M.D., Instructor in Radiology.

John L. Sosman, M.D., Instructor in Radiology.

Roy J. Barry, M.D., Assistant in Radiology.

RAFAEL A. BERLANGA, M.D., Assistant in Radiology.

JOACHIM BURHENNE, M.D., Assistant in Radiology.

Boris P. Bushueff, M.D., Assistant in Radiology.

Fred L. DeGiacomo, M.D., Assistant in Radiology.

JACK R. DREYFUSS, M.D., Assistant in Radiology.

Louis J. DuPreez, M.B., Ch.B., Assistant in Radiology.

MIRLE A. KELLETT, MD., Assistant in Radiology.

ALEXANDER S. MACMILLAN, JR., M.D., Assistant in Radiology.

JAMES M. McNeill, M.D., Assistant in Radiology.

RICHARD G. O'BRIEN, M.D., Assistant in Radiology.

MAJIC S. POTSAID, M.D., Assistant in Radiology.

ROBERT RICHARDS, M.D., Assistant in Radiology.

HERBERT SCHUNK, M.D., Assistant in Radiology.

Morris Simon, M.B., Ch.B., Assistant in Radiology.

FRITZ STARER, M.D., Assistant in Radiology.

CHIU-CHEN WANG, M.D., Assistant in Radiology.

EDWARD W. WEBSTER, Ph.D., Assistant in Radiology.

Guido Iannaccone, M.D., Research Fellow in Radiology (appointment expired October 15, 1958).

Norman L. Sadowsky, M.D., Research Fellow in Radiology (appointment expired December 31, 1958).

HENRY P. PENDERGRASS, M.D., Teaching Fellow in Radiology.

DEWITT E. WOLD, M.D., Teaching Fellow in Radiology (appointment expired December 31, 1958).

# REQUIRED COURSES

First Year. — Radiological instruction during the first year will comprise a series of lectures, during the first semester of the course in Anatomy, designed to introduce and apply the X-ray method as a means of studying gross internal anatomy in health and disease.

Second Year. — During the second semester of the second year, small group exercises and laboratories will be conducted in conjunction with the program of correlative teaching, with emphasis on the systematic approach to X-ray interpretation and the correlation of abnormal findings with gross pathology and patho-physiology.

Third Year. — During the third year the following instruction will be offered: (a) three general lectures — two on radiation therapy and one on the safe conduct of radiological procedures; (b) an interdepartmental symposium on "Risk vs. Need" in X-ray diagnosis and therapy; (c) three clinical exercises, one each trimester, for the purpose of correlating the major types of X-ray examination with the diagnosis and treatment of disease states and (d) exercises during each trimester for the third of the class taking surgery, involving observation and discussion of X-ray findings on representative surgical cases under study.

# FOURTH YEAR ELECTIVE COURSE

Radiology. Drs. Dealy, P.B.B.H., Robbins, M.G.H., Ritvo, B.C.H., Fleischner, B.I.H., Neuhauser, C.M.C., Marks, N.E.D.H., Schatzki, Mt. A.H., and Bushueff, W.R.V.A.H.

# **Pediatrics**

- ALLAN M. BUTLER, M.D., Professor of Pediatrics and Head of the Department at the Massachusetts General Hospital.
- CHARLES A. JANEWAY, M.D., Thomas Morgan Rotch Professor of Pediatrics and Head of the Department at The Children's Hospital.
- Louis K. Diamond, M.D., Associate Professor of Pediatrics at The Children's Hospital.
- HARRY SHWACHMAN, M.D., Associate Clinical Professor of Pediatrics and Tutor in Medical Science.

- CLEMENT A. SMITH, M.D., A.M. (hon.), Associate Professor of Pediatrics at the Boston Lying-in Hospital and Chairman of the Executive Committee of the Departments of Pediatrics.
- NATHAN B. TALBOT, M.D., Associate Professor of Pediatrics at the Massachusetts General Hospital.
- Fred H. Allen, Jr., M.D., Assistant Clinical Professor of Pediatrics.
- WILLIAM BERENBERG, M.D., Assistant Clinical Professor of Pediatrics.
- RANDOLPH K. Byers, M.D., Assistant Clinical Professor of Pediatrics.
- STEWART H. CLIFFORD, M.D., Assistant Clinical Professor of Pediatrics.
- Charles D. Cook, M.D., Assistant Professor of Pediatrics at The Children's Hospital and Tutor in Medical Science.
- JOHN D. CRAWFORD, M.D., Assistant Professor of Pediatrics.
- JOHN A. V. DAVIES, M.D., Assistant Clinical Professor of Pediatrics.
- R. Cannon Eley, M.D., Assistant Clinical Professor of Pediatrics.
- DAVID GITLIN, M.D., Assistant Professor of Pediatrics and Tutor in Medical Science (absent July 1, 1958–June 30, 1959).
- Benedict F. Massell, M.D., Assistant Clinical Professor of Pediatrics.
- ALEXANDER S. NADAS, M.D., Assistant Clinical Professor of Pediatrics.
- RALPH A. Ross, M.D., Assistant Clinical Professor of Pediatrics.
- James R. Gallagher, M.D., Lecturer on Pediatrics.
- JOHN F. CRIGLER, JR., M.D., Associate in Pediatrics.
- HENRY E. GALLUP, M.D., Clinical Associate in Pediatrics.
- ROBERT J. HAGGERTY, M.D., Associate in Pediatrics.
- SIDNEY KIBRICK, Ph.D., M.D., Associate in Pediatrics at The Children's Hospital.
- CESARE T. LOMBROSO, M.D., Clinical Associate in Pediatrics.
- HARRY L. MUELLER, M.D., Clinical Associate in Pediatrics.
- RICHMOND S. PAINE, M.D., Associate in Pediatrics at The Children's Hospital.

ABRAHAM M. RUDOLPH, M.D., Associate in Pediatrics.

SYDNEY S. GELLIS, M.D., Lecturer on Pediatrics.

Louis Weinstein, Ph.D., M.D., Lecturer on Infectious Diseases.

GABOR CZONICZER, M.D., Research Associate in Pediatrics.

NORMAN I. GOLD, Ph.D., Research Associate in Biological Chemistry in the Department of Pediatrics.

A. RICHARDSON JONES, M.B., B.S., Research Associate in Pediatrics.

LAWRENCE C. KINGSLAND, JR., M.D., Research Associate in Pediatrics.

EDITH MEYER, Ph.D., Research Associate in Pediatrics.

GERALD NELIGAN, R.M.B.C.H., Research Associate in Pediatrics.

MARIT SKATVEDT, M.D., Research Associate in Pediatrics.

Pran N. Taneja, M.D., Research Associate in Pediatrics (appointment expires March 31, 1959).

OLGA E. ALLERS, M.D., Instructor in Pediatrics.

THOMAS B. BRAZELTON, M.D., Instructor in Pediatrics.

JOHN K. BRINES, M.D., Instructor in Pediatrics.

LEO B. BURGIN, M.D., Instructor in Pediatrics.

RALPH W. DAFFINEE, M.D., Instructor in Pediatrics.

WILLIAM A. DICKSON, M.D., Instructor in Pediatrics.

ELAINE K. DONNELLAN, M.D., C.M., Instructor in Pediatrics.

JAMES E. DRORBAUGH, M.D., Instructor in Pediatrics.

EDWARD C. DYER, M.D., Instructor in Pediatrics.

Francis X. Fellers, M.D., Instructor in Pediatrics.

ALBERT A. FRANK, M.D., Instructor in Pediatrics.

ELIZABETH G. FRENCH, M.D., Instructor in Pediatrics.

ROBERT N. GANZ, M.D., Instructor in Pediatrics.

Park S. Gerald, M.D., Instructor in Pediatrics (appointment expired August 31, 1958).

FELIX P. HEALD, JR., M.D., Instructor in Pediatrics.

ALLEN M. HILL, M.D., Instructor in Pediatrics.

JOHN P. HUBBELL, JR., M.D., Instructor in Pediatrics.

SAMUEL L. KATZ, M.D., Instructor in Pediatrics.

RICHARD B. KEARSLEY, M.D., Instructor in Pediatrics.

ALEXANDER S. MACDONALD, JR., M.D., Instructor in Pediatrics.

ROBERT P. MASLAND, JR., M.D., Instructor in Pediatrics.

Francis C. McDonald, M.D., Instructor in Pediatrics.

JOSEPH J. McGOVERN, M.D., Instructor in Pediatrics.

DONALD E. McLean, M.D., Instructor in Pediatrics.

FERNANDO MONCKEBERG, M.D., Instructor in Pediatrics (appointment expires March 31, 1959).

DOROTHEA M. MOORE, M.D., Instructor in Pediatrics.

ROBERT T. MOULTON, M.D., Instructor in Pediatrics.

THOMAS C. PEEBLES, M.D., Instructor in Pediatrics.

MURRAY E. PENDLETON, M.D., Instructor in Pediatrics.

WILLIAM PFEFFER, JR., M.D., Instructor in Pediatrics.

Frederick S. Porter, Jr., M.D., Instructor in Pediatrics.

GERTRUD C. REYERSBACH, M.D., Instructor in Pediatrics.

JOHN S. ROBEY, M.D., Instructor in Pediatrics.

KENNETH F. SANDS, M.D., Instructor in Pediatrics.

ROBERT T. Sceery, M.D., Instructor in Pediatrics.

EDWARD M. SEARS, M.D., Instructor in Pediatrics.

EDWARD W. SHERWOOD, M.D., Instructor in Pediatrics.

ABRAHAM S. SMALL, M.D., Instructor in Pediatrics.

LENDON SNEDEKER, M.D., Instructor in Pediatrics.

RUDOLF TOCH, M.D., Instructor in Pediatrics.

WILLIAM J. TURTLE, M.D., Instructor in Pediatrics.

JOHN W. G. TUTHILL, M.D., Instructor in Pediatrics.

WILLIAM D. WINTER, JR., M.D., Instructor in Pediatrics.

ELEONORE C. ZAUDY, M.D., Instructor in Pediatrics.

IRVING W. BAILIT, M.D., Assistant in Pediatrics.

Bernard A. Berman, M.D., Assistant in Pediatrics.

EUAN T. BLANCH, M.D., Assistant in Pediatrics.

WILLIAM D. COCHRAN, M.D., Assistant in Pediatrics.

ALBERT COHEN, M.D., Assistant in Pediatrics.

GEORGE T. CRITZ, M.D., Assistant in Pediatrics.

Kelley K. Davis, M.D., Assistant in Pediatrics.

WILLIAM R. DORSEY, M.D., C.M., Assistant in Pediatrics.

LEROY L. ELDREDGE, JR., M.D., Assistant in Pediatrics.

LAWRENCE J. ESSEMBER, M.D., Assistant in Pediatrics.

STEPHEN M. FRAWLEY, M.D., Assistant in Pediatrics.

SIDNEY GREEN, M.D., Assistant in Pediatrics.

ELIZABETH A. GREGORY, M.D., Assistant in Pediatrics.

Sprague W. Hazard, M.D., Assistant in Pediatrics.

MAURICE N. KAY, M.D., Assistant in Pediatrics.

JOAN KAZANJIAN, M.D., Assistant in Pediatrics.

LUCAS L. KULCZYCKI, M.B., CH.B., Assistant in Pediatrics.

DUNCAN H. MACNAMEE, M.D., Assistant in Pediatrics.

OTTO S. NAU, M.D., Assistant in Pediatrics.

ROBERT J. ORME, M.D., Assistant in Pediatrics.

Joseph Osborne, M.D., Assistant in Pediatrics.

Julian L. Pearlman, M.D., Assistant in Pediatrics.

HOWARD J. POTTER, M.D., Assistant in Pediatrics.

ARTHUR J. SALISBURY, M.D., Assistant in Pediatrics.

GERALD B. SHATTUCK, M.D., Assistant in Pediatrics.

JOHN A. Spargo, M.D., Assistant in Pediatrics.

GEORGE H. TAFT, M.D., Assistant in Pediatrics.

MARY L. TERRY, A.B., Assistant in Pediatrics.

WILHELMINA M. VAN DYKE, M.D., Assistant in Pediatrics.

JACOB WALLACE, M.D., Assistant in Pediatrics.

HAROLD J. WHEELER, M.D., Assistant in Pediatrics.

THOMAS J. WHITFIELD, M.D., Assistant in Pediatrics.

ELIOT YOUNG, M.D., Assistant in Pediatrics.

ABRAHAM ABRAHAMOV, M.D., Research Fellow in Pediatrics (appointment expires December 31, 1958).

Donald M. Allen, M.D., Research Fellow in Pediatrics.

ELIZABETH ASTERIADOU-SAMARTZIS, M.D., Research Fellow in Pediatrics.

PETER A. M. AULD, M.D., C.M., Research Fellow in Pediatrics.

MARY E. AVERY, M.D., Research Fellow in Pediatrics.

HERBERT BARRIE, M.D., Research Fellow in Pediatrics (resigned September 30, 1958).

GUNTER G. BARTSCH, DR.MED., Research Fellow in Pediatrics (appointment expired October 31, 1958).

ROBERT B. BERG, M.D., Research Fellow in Pediatrics.

TEOGENES A. CARBONILLA, M.D., Research Fellow in Pediatrics.

ELEONORE DEWS, M.B., Ch.B., Research Fellow in Pediatrics.

STUART Q. FLERLAGE, M.D., Research Fellow in Pediatrics (resigned September 30, 1958).

WILLIAM I. FORSYTHE, M.D., Research Fellow in Pediatrics (appointment expired August 31, 1958).

THOMAS E. FROTHINGHAM, M.D., Research Fellow in Pediatrics.

Hossein K. Ghadimi, M.D., Research Fellow in Pediatrics.

PAUL A. M. GROSS, M.D., Research Fellow in Pediatrics.

JACQUELINE GUIGNARD, M.D., Research Fellow in Pediatrics.

Anna Hauck, M.D., Research Fellow in Pediatrics (appointment expired December 31, 1958).

JUDITH HERTZ, M.D., Research Fellow in Pediatrics (appointment expired December 31, 1958).

JULIEN I. E. HOFFMAN, M.B., CH.B., Research Fellow in Pediatrics.

JAY S. JHAVERI, M.D., Research Fellow in Pediatrics.

MICHAEL C. JOSEPH, M.D., Research Fellow in Pediatrics.

JOHN A. KNAPP, M.D., Research Fellow in Pediatrics.

KWANG W. Ko, M.D., Research Fellow in Pediatrics.

JEROME LIEBMAN, M.D., Research Fellow in Pediatrics.

CAMPBELL W. McMILLAN, M.D., Research Fellow in Pediatrics.

Ann E. Niall, M.B., B.S., Research Fellow in Pediatrics (appointment expired December 31, 1958).

MARIA NIKOLAIDOU, M.D., Research Fellow in Pediatrics.

JACQUELINE A. NOONAN, M.D., Research Fellow in Pediatrics.

HOWARD A. PEARSON, M.D., Research Fellow in Pediatrics.

JAN-HENRIK PROBST, M.D., Research Fellow in Pediatrics (resigned December 31, 1958).

RANGANATHAPURAM-SUNDRESA RAMACHANDRAN, M.B., B.S., Research Fellow in Pediatrics (appointment expired August 31, 1958).

JAMES L. REYNOLDS, M.D., Research Fellow in Pediatrics.

ROBERT H. RICHIE, M.D., Research Fellow in Pediatrics.

ARNOLD J. RUDOLPH, M.B., CH.B., Research Fellow in Pediatrics.

ROBERTO RUEDA, M.D., Research Fellow in Pediatrics.

ARTHUR A. SASAHARA, M.D., Research Fellow in Pediatrics.

NASROLLAH T. SHAHIDI, M.D., Research Fellow in Pediatrics.

JUAN F. Sotos, M.D., Research Fellow in Pediatrics.

JOHANNA A. K. SYPESTEN, M.D., Research Fellow in Pediatrics. Beno S. Vajda, M.D., Research Fellow in Pediatrics (appointment expired August 31, 1958).

DOROTHY B. VILLEE, M.D., Research Fellow in Pediatrics.

SUMNER J. YAFFE, M.D., Research Fellow in Pediatrics.

ROBERT W. CHAMBERLIN, JR., M.D., Teaching Fellow in Pediatrics.

STANFORD FRIEDMAN, M.D., Teaching Fellow in Pediatrics.

Donald Glicklich, M.D., Teaching Fellow in Pediatrics (appointment expired December 31, 1958).

HERBERT S. HURWITZ, M.D., Teaching Fellow in Pediatrics.

SHERWIN V. KEVY, M.D., Teaching Fellow in Pediatrics.

Howard S. King, M.D., Teaching Fellow in Pediatrics.

JOHANNA KRIJGSMAN, M.D., Teaching Fellow in Pediatrics.

BETTY A. Lowe, M.D. Teaching Fellow in Pediatrics.

NORMAN L. MILLER, M.D., Teaching Fellow in Pediatrics.

JAMES N. MONTGOMERY, M.D., Teaching Fellow in Pediatrics (appointment expired December 31, 1958).

GERHARD NELLHAUS, M.D., Teaching Fellow in Pediatrics.

NICHOLAS M. NELSON, M.D., Teaching Fellow in Pediatrics.

PHILIP J. PORTER, M.D., Teaching Fellow in Pediatrics.

RAPHAEL B. REIDER, M.D., Teaching Fellow in Pediatrics.

PATRICIA A. RUSSELL, M.B., B.S., Teaching Fellow in Pediatrics.

MARGARET SINGLE, M.D., Teaching Fellow in Pediatrics (appointment expired December 31, 1958).

BARBARA A. STEPHENSON, M.D., Teaching Fellow in Pediatrics.

# Affiliated:

RAYMOND D. Adams, M.D., Bullard Professor of Neuropathology. Martha W. Eliot, M.D., Professor of Maternal and Child Health, H.S.P.H.

GEORGE E. GARDNER, M.D., Clinical Professor of Psychiatry.

THOMAS H. WELLER, M.D., Richard Pearson Strong Professor of Tropical Public Health, H.S.P.H.

WILLIAM M. SCHMIDT, M.D., Associate Professor of Maternal and Child Health, H.S.P.H.

BENJAMIN G. FERRIS, JR., M.D., Assistant Professor of Physiology, H.S.P.H.

PAULINE G. STITT, M.D., M.P.H., Assistant Professor of Maternal and Child Health, H.S.P.H.

EVAN CALKINS, M.D., Assistant Professor of Medicine.

ARTHUR J. LINENTHAL, M.D., Clinical Associate in Medicine.

JANET W. McARTHUR, M.D., Clinical Associate in Medicine.

PHILIP R. Dodge, M.D., Associate in Neurology at the Massachusetts General Hospital.

ALLAN L. FRIEDLICH, JR., M.D., Instructor in Medicine.

JOHN H. LAMONT, M.D., Instructor in Psychiatry.

ROBERT T. LONG, M.D., Instructor in Psychiatry.

MAURICE M. OSBORNE, JR., M.D., Instructor in Child Health, H.S.P.H.

Morton N. Swartz, M.D., Associate in Medicine at the Massachusetts General Hospital.

MARY L. L. SCHOLL, M.D., Assistant in Neurology.

# REQUIRED COURSES

PEDIATRICS A. Second Year. — A few lectures are given during the second year to familiarize the students with the study of children's diseases before they come into contact with patients. In this series are discussed the physiology of nutrition and the principles of infant feeding, the anatomical and physiological differences between children and adults, a consideration of the normal growth and development of children and the physiology and pathology of body fluids.

PEDIATRICS B. Third Year. — A few lectures are given in which the more important aspects of the diseases of childhood are presented. Three whole class lectures, on special subjects, are assigned to pediatrics by the Department of Medicine.

2. Section teaching: Each section, during its assignment to the Children's Hospital for thirty-two days, receives correlated instruction in pediatrics, surgery, and orthopaedic surgery. Each group of three students is assigned to the out-patient department and wards for fifteen periods of three hours each, where under the supervision of their instructor they receive actual experience in history-taking, physical

examination and the care of infants and children. Conferences and clinics on important aspects of pediatrics form part of the course. One afternoon a week is devoted to demonstrations and practice in the care of the normal infant and child and five other afternoon exercises are devoted to pathological conferences and special clinics.

PEDIATRICS C. Fourth Year. — The fourth year work consists of a month of instruction, either at the Children's Medical Service of the Massachusetts General Hospital or at the Children's and Infants' Hospitals. The students act as clinical clerks on the wards and receive instruction in infectious diseases at the New England Center Hospital once a week.

		SECOND YEAR	HOURS
Clinical lectures	C.M.C.	Second half-year.	4
		THIRD YEAR	
Clinical lectures	C.M.C.	First half-year.	8
Section teaching	. C.M.C.	Throughout the year	63

## FOURTH YEAR

Cı.	Clinical Clerkship.	Dr. Janeway and Associates. C.M.C.	144
C2.	Clinical Clerkship.	Dr. Butler and Associates. M.G.H.	144

# FOURTH YEAR ELECTIVE COURSES

- 3. Advanced Pediatrics. Dr. Janeway and Associates. C.M.C. and B.L.I.H. Whole course, all day. Opportunities are offered in General Pediatrics, Neoplastic Diseases, Metabolic Research, Adolescent Medicine, Neonatal Pediatrics, Neurology, Hematology, and Cardiology.
- 4. Advanced Pediatrics. Dr. Butler and Associates. M.G.H. Whole course, all day. Opportunities are offered in General Pediatrics, Endocrinology and Metabolic Research, Neurology and Pediatric Family Practice.
- 5. Child Psychiatry. a. Dr. Lamont and Associates. M.G.H. Whole course, all day (same course as Psychiatry 9). b. Dr. Gardner and Associates. C.M.C. Judge Baker. Whole course, all day (same course as Psychiatry 11).
- 6. Infectious Diseases. Dr. Weinstein. H.M.H. Whole course, all day.

# **Obstetrics**

- DUNCAN E. REID, M.D., William Lambert Richardson Professor of Obstetrics and Head of the Department.
- BENJAMIN TENNEY, JR., M.D., Clinical Professor of Obstetrics.
- Franklin F. Snyder, M.D., A.M. (hon.), Associate Professor of Anatomy and Obstetrics.
- Daniel Abramson, M.D., Assistant Clinical Professor of Obstetrics.
- HAROLD H. ROSENFIELD, M.D., Assistant Clinical Professor of Obstetrics.
- ALAN B. LITTLE, M.D., C.M., Associate in Gynecology and Obstetrics and Tutor in Medical Science.
- CHARLES P. SHELDON, M.D., Clinical Associate in Obstetrics.
- Emmanuel C. Amoroso, M.D., Visiting Lecturer on Obstetrics (December 9–12, 1958).
- CRAIG S. HOUSTON, M.D., Lecturer on Obstetrics.
- NORIMASA HOSYA, M.D., Ph.D., Research Associate in Obstetrics (appointment expires February 28, 1959).
- JOHN A. MACLAREN, Ph.D., Research Associate in Obstetrics.
- CHARLES C. ROBY, Ph.D., Research Associate in Obstetrics.
- ROBERT H. BARKER, M.D., Instructor in Obstetrics.
- BERTRAM H. BUXTON, JR., M.D., Instructor in Obstetrics.
- MARION F. EADES, M.D., Instructor in Obstetrics.
- A. GORDON GAULD, M.D., Instructor in Gynecology and in Obstetrics.
- LUKE GILLESPIE, M.D., Instructor in Gynecology and in Obstetrics.
- ARTHUR C. GORBACH, JR., M.D., Instructor in Gynecology and Obstetrics.
- RICHARD H. GROGAN, M.D., Instructor in Gynecology and Obstetrics.
- CRAWFORD H. HINMAN, M.D., Instructor in Gynecology and Obstetrics.
- JOHN F. JEWETT, M.D., Instructor in Gynecology and Obstetrics. Walter S. Jones, M.D., Instructor in Obstetrics.

WILLIAM J. MULLIGAN, M.D., Instructor in Gynecology and Obstetrics.

JOHN L. NEWELL, M.D., Instructor in Obstetrics.

Francis Rouillard, M.D., Instructor in Obstetrics.

JUDSON A. SMITH, M.D., Instructor in Obstetrics.

BARTLETT H. STONE, M.D., Instructor in Gynecology and Obstetrics.

HERBERT E. BROOKS, JR., M.D., Assistant in Obstetrics.

ROBERT V. DANDROW, M.D., Assistant in Obstetrics.

GERALD R. DENNISON, M.D., Assistant in Obstetrics.

CHARLES L. EASTERDAY, M.D., Assistant in Gynecology and Obstetrics.

Daniel H. Hindman, M.D., Assistant in Obstetrics.

RUBY G. JACKSON, M.D., C.M., Assistant in Gynecology and Obstetrics.

Francis R. Lane, M.D., Assistant in Obstetrics.

HERBERT T. LEIGHTON, M.D., Assistant in Obstetrics.

WILLIAM J. MACDONALD, M.D., Assistant in Obstetrics.

CHARLES POTTER, M.D., Assistant in Obstetrics.

WILLIAM A. REID, M.D., Assistant in Obstetrics.

Frederic W. Ripley, Jr., M.D., Assistant in Obstetrics.

PETER G. ROBBINS, M.D., Assistant in Obstetrics.

SEYMOUR SACKS, M.D., Assistant in Obstetrics.

ARTHUR J. SCHRAMM, M.D., Assistant in Obstetrics.

WESTON F. SEWALL, M.D., Assistant in Obstetrics.

LLOYD I. SEXTON, M.D., Assistant in Obstetrics.

SIDNEY STAHLER, M.D., Assistant in Obstetrics.

ARTHUR W. TUCKER, JR., M.D., Assistant in Gynecology and in Obstetrics.

JOHN TURNER, II, M.D., Assistant in Obstetrics.

Albert E. Weiner, M.D., Assistant in Obstetrics.

THEODORE C. BARTON, M.D., Research Fellow in Obstetrics.

THEODORE FAINSTAT, M.D., C.M., Research Fellow in Obstetrics.

JACQUES F. A. ROUX, M.D., Research Fellow in Obstetrics.

AKSEL M. SALOHEIMO, M.D., Research Fellow in Obstetrics (appointment expired November 30, 1958).

JOHN W. GROVER, M.D., Teaching Fellow in Obstetrics.

Basil T. Harter, M.D., Teaching Fellow in Obstetrics (appointment expired September 30, 1958).

STANKY W. KENT, M.D., Teaching Fellow in Obstetrics (Janu-

ary 1, 1959 through June 30, 1959).

JOHN B. JOSIMOVICH, M.D., Teaching Fellow in Obstetrics.

THOMAS LEAVITT, JR., M.D., Teaching Fellow in Obstetrics (appointment expired December 31, 1958).

JOHN L. LEWIS, JR., M.D., Teaching Fellow in Obstetrics.

Armand Maillot, M.D., Teaching Fellow in Obstetrics (appointment expires March 31, 1959).

KENNETH J. RYAN, M.D., Teaching Fellow in Obstetrics and

Tutor in Medical Science.

# Affiliated:

C. Sidney Burwell, M.D., S.D., (hon.), Samuel A. Levine Professor of Medicine.

ARTHUR T. HERTIG, M.D., Shattuck Professor of Pathological Anatomy.

Samuel B. Kirkwood, M.D., S.D. (hon.), Clinical Professor of Maternal Health, H.S.P.H.

CLEMENT A. SMITH, M.D., Associate Professor of Pediatrics at the Boston Lying-in Hospital.

CLAUDE A. VILLEE, JR., Ph.D., Associate Professor of Biological Chemistry at the Boston Lying-in Hospital.

STEWART H. CLIFFORD, M.D., Assistant Clinical Professor of Pediatrics.

Donald G. McKay, M.D., Assistant Professor of Pathology at the Boston Lying-in Hospital and the Free Hospital for Women.

JAMES METCALFE, M.D., Associate in Medicine.

Kurt Benirschke, M.D., Associate in Pathology at the Boston Lying-in Hospital.

DWAIN D. HAGERMAN, M.D., Associate in Biological Chemistry. ABRAHAM ABRAHAMOV, M.D., Research Fellow in Pediatrics.

MARY ELLEN AVERY, M.D., Research Fellow in Pediatrics. Peter A. McF. Auld, M.D., Research Fellow in Pediatrics. Gerald E. Gaull, M.D., Research Fellow in Pathology. Arnold J. Rudolph, M.D., Research Fellow in Pediatrics.

# Required Courses

Second Year. — Whole class exercises in conjunction with the Departments of Physiology, Biochemistry, Pathology and Gynecology, covering the broad aspects of the physiology of reproduction and of femaleness from infancy to senility.

Third Year. — A series of lectures is given in conjunction with the Department of Gynecology during the course of the year. One month of the regular third-year curriculum is devoted to a course in Obstetrics and Gynecology. Students are assigned to the gynecologic out-patient clinics of the Massachusetts General Hospital and the Free Hospital for Women, and to obstetrics at the Boston Lying-in Hospital and the Boston City Hospital. In the latter two clinics each student has an opportunity to study the care of pregnancy. Instruction is given in the obstetric examination. Under special instructors considerable time is devoted to conferences on normal obstetrics and to observation of patients in labor and during delivery. The student participates in seminars throughout the month in obstetrics and gynecology and related fields.

Fourth Year. — This course takes one month of the regular fourth year curriculum and consists of a combined service in obstetrics and gynecology at the Boston Lying-in Hospital, the Boston City Hospital, the Free Hospital for Women and the gynecologic services at the Massachusetts General Hospital. During this period the student lives at the hospital and devotes his time chiefly to attendance to cases in the hospital. In the course of his work the student is called to assist at operations and to make ward visits with the visiting physician on duty. The student conducts the convalescent care of the cases delivered during his resident service and receives instruction in the general management of normal and abnormal labor and in the care of the newborn. During this time each student is assigned to normal cases in the hospital to follow through labor, delivery and the puerperium. The student takes histories and examines all patients who are admitted to the hospital with medical conditions complicating the pregnant

state. The remainder of the time is devoted to the care and problems of the newborn under the supervision of the attending pediatrician. The student is given a demonstration of operative obstetrics during resident service, and each student has an opportunity to perform the different operations on the manikin. Student conferences and instruction in obstetric pathology are an important part of the course. Except for conferences throughout the month at the Boston Lying-in Hospital, the student's time is devoted equally between obstetrics and gynecology.

#### SECOND YEAR

HOURS

Lectures on Pathophysiology of reproduction and femaleness. Drs. Hertig, Knobil, Reid, Smith, Sturgis, and Ulfelder.

#### THIRD YEAR

Lectures on Abnormal Obstetrics. Drs. Reid, Tenney and Associates. B.L.I.H.

24

Practical instruction in Clinical Obstetrics. Throughout the year in seminars. 104

#### FOURTH YEAR

C1. General Obstetrics. Drs. Reid, Tenney, and Associates. B.L.I.H. Practical instruction, in sections, in Clinical Obstetrics, including care of the newborn. One month.

144

# FOURTH YEAR ELECTIVE COURSE

2. Clinical Obstetrics. Providence Lying-in Hospital. Dr. CRAIG Houston and Associates. One month.

# **Preventive Medicine**

- DAVID D. RUTSTEIN, M.D., Professor of Preventive Medicine and Head of the Department. (Absent September 27, 1958 to December 12, 1958.)
- DEAN A. CLARK, M.D., Clinical Professor of Preventive Medicine. CECIL G. SHEPS, M.D., M.P.H., Clinical Professor of Preventive Medicine.

- HARRIET L. HARDY, M.D., Associate Clinical Professor of Preventive Medicine.
- MINDEL C. SHEPS, M.D., Assistant Professor of Preventive Medicine.
- Francis L. Mussells, M.D., C.M., Lecturer on Preventive Medicine.
- Joseph Stokes, 3D, M.D., Associate in Preventive Medicine.
- WILLIAM B. KANNEL, M.D., Research Fellow in Preventive Medicine.
- Marcello Martinelli, M.D., Research Fellow in Preventive Medicine (appointment expired November 30, 1958).
- RINALDO PELLEGRINI, M.D., Research Fellow in Preventive Medicine.
- IRWIN SCHAFER, M.D., Research Fellow in Preventive Medicine. LLOYD TEPPER, M.D., Research Fellow in Preventive Medicine.

## Affiliated:

- CONRAD WESSELHOEFT, M.D., Visiting Lecturer on Infectious Diseases, S.P.H.
- JOHANNES IPSEN, JR., M.D., M.P.H., Associate Professor of Public Health, S.P.H.
- JANE WORCESTER, DR.P.H., Associate Professor of Biostatistics, S.P.H.

The preventive aspects of medicine and its various specialties are taught in all departments of the Medical School, and arrangements are made for the integration of such teaching with the more formal teaching in the required course in preventive medicine. An effort is made to stress those aspects of preventive medicine which concern the practicing physician, rather than those which concern the public health officer.

# REQUIRED COURSES

PREVENTIVE MEDICINE A. Third Year. — The course in preventive medicine consists of clinics, lectures and symposia. The preventive aspects of clinical medicine are correlated with information in the

fields of epidemiology, biostatistics, social medicine, occupational medicine, medical economics and environmental sanitation.

PREVENTIVE MEDICINE C. Fourth Year. — A Health Resources Survey, evaluating community facilities for the total medical care of specified patients, is required of all students.

## THIRD YEAR

**HOURS** 

Clinics, symposia and lectures. Dr. Rutstein and Associates, in cooperation with representatives of other departments.

85

## FOURTH YEAR

Health Resources Survey and individual student conference.

50

# FOURTH YEAR ELECTIVE COURSES

- 1. Advanced work in Preventive Medicine and Epidemiology. Dr. RUTSTEIN and Associates. This includes opportunity for one month's work in the Division of Social Medicine, Montefiore Hospital, New York City.
- 2. Occupational Medicine. Dr. HARDY and Associates. M.G.H. and M.I.T. Whole course, all day. Limited to one student a month.

## VOLUNTARY COURSE

Associates. Eight 2 hour seminars in March and April. Open to third and fourth year students (limited to fifteen students). Seminars will be conducted on the design of observational and experimental studies in clinical research. Emphasis will be placed on prophylactic and clinical trials. Conference subjects will include definition of the disease or entity under study, methods of sampling, selection of controls and use of patients as their own controls, ethical considerations, adequacy of numbers of subjects and of observations, criteria for the evaluation of results, and methods of analyzing and interpreting data.

# Surgery

EDWARD D. CHURCHILL, M.D., Dr. (hon.), S.D. (hon.), LL.D., John Homans Professor of Surgery and Head of the Department at the Massachusetts General Hospital.

J. Englebert Dunphy, M.D., Professor of Surgery and Head of the Department at the Boston City Hospital.

JACOB FINE, M.D., Professor of Surgery at the Beth Israel Hospital and Head of the Department at the Beth Israel Hospital.

ROBERT E. GROSS, M.D., S.D. (hon.), William E. Ladd Professor of Child Surgery and Head of the Department at The Children's Hospital.

Francis D. Moore, M.D., Moseley Professor of Surgery and Head of the Department at the Peter Bent Brigham Hospital and Secretary to the Departments of Surgery.

CHARLES C. LUND, M.D., Clinical Professor of Surgery.

HENRY K. BEECHER, M.D., Henry Isaiah Dorr Professor of Research and Teaching in Anaesthetics and Anaesthesia.

J. HARTWELL HARRISON, M.D., Clinical Professor of Genito-Urinary Surgery.

LELAND S. McKittrick, M.D., Clinical Professor of Surgery.

Francis C. Newton, M.D., Clinical Professor of Surgery.

LEROY D. VANDAM, M.D., Clinical Professor of Anaesthesia.

RICHARD WARREN, M.D., Clinical Professor of Surgery.

JAMES C. WHITE, M.D., Professor of Surgery at the Massachusetts General Hospital.

OLIVER COPE, M.D., DR. (hon.), Associate Professor of Surgery.

DWIGHT E. HARKEN, M.D., Associate Clinical Professor of Surgery.

Franc D. Ingraham, M.D., Associate Professor of Surgery at The Children's Hospital.

WYLAND F. LEADBETTER, M.D., Associate Clinical Professor of Surgery.

Donald D. Matson, M.D., Associate Clinical Professor of Surgery. Richard H. Sweet, M.D., Associate Clinical Professor of Surgery.

WILLIAM H. SWEET, M.D., Associate Professor of Surgery at the Massachusetts General Hospital.

CARL W. WALTER, M.D., Associate Clinical Professor of Surgery.

EDWARD B. BENEDICT, M.D., Assistant Clinical Professor of Surgery.

JOHN P. BUNKER, M.D., Assistant Clinical Professor of Anaesthesia.

- Howard A. Frank, M.D., Assistant Professor of Surgery at the Beth Israel Hospital and Tutor in Surgery.
- EDWARD HAMLIN, JR., M.D., Assistant Clinical Professor of Surgery.
- ROBERT R. LINTON, M.D., Assistant Clinical Professor of Surgery.
- Donald W. MacCollum, M.D., Assistant Clinical Professor of Surgery.
- WILLIAM V. McDermott, Jr., M.D., Assistant Clinical Professor of Surgery.
- MELVIN P. OSBORNE, M.D., Assistant Clinical Professor of Surgery.
- GEORGE C. PRATHER, M.D., Assistant Clinical Professor of Surgery.
- THOMAS B. QUIGLEY, M.D., Assistant Clinical Professor of Surgery.
- JOHN W. RAKER, M.D., Assistant Clinical Professor of Surgery.
- J. Gordon Scannell, M.D., Assistant Clinical Professor of Surgery.
- ROBERT M. SMITH, M.D., Assistant Clinical Professor of Anaesthesia.
- Donald P. Todd, M.D., Assistant Clinical Professor of Anaesthesia.
- Walter R. Wegner, M.D., Assistant Clinical Professor of Surgery.
- Augustus Thorndike, M.D., Lecturer on Surgery.
- THORKILD W. ANDERSEN, M.D., Clinical Associate in Anaesthesia.
- HENRY T. BALLANTINE, JR., M.D., Clinical Associate in Surgery.
- MARSHALL K. BARTLETT, M.D., Clinical Associate in Surgery.
- EDGAR A. BERING, JR., M.D., Clinical Associate in Surgery.
- THOMAS W. BOTSFORD, M.D., Clinical Associate in Surgery.
- WILLIAM R. Brewster, Jr., M.D., Associate in Anaesthesia at the Massachusetts General Hospital.
- JOHN R. BROOKS, M.D., Clinical Associate in Surgery.
- Bradford Cannon, M.D., Clinical Associate in Surgery.
- CHILTON CRANE, M.D., Clinical Associate in Surgery.

EDWARD D. FRANK, M.D., Associate in Surgery and Tutor in Medical Science.

Edward A. Gaensler, M.D., Clinical Associate in Surgery.

SAMUEL GILMAN, M.D., Clinical Associate in Anaesthesia.

Louis Hermanson, M.D., Clinical Associate in Surgery.

SYLVESTER B. KELLEY, M.D., Clinical Associate in Surgery.

WALTER S. KERR, JR., M.D., Clinical Associate in Surgery.

LUTHER A. LONGINO, M.D., Clinical Associate in Surgery.

JOSEPH E. MURRAY, M.D., Clinical Associate in Surgery.

GEORGE L. NARDI, M.D., Clinical Associate in Surgery.

ALEXANDER M. RUTENBURG, M.D., Associate in Surgery at the Beth Israel Hospital.

ROBERT S. SHAW, M.D., Associate in Surgery at the Massachusetts General Hospital.

GEORGE W. B. STARKEY, M.D., Clinical Associate in Surgery.

HERBERT S. TALBOT, M.D., Clinical Associate in Surgery.

WILLIAM R. WADDELL, M.D., Clinical Associate in Surgery.

CLAUDE E. WELCH, M.D., Clinical Associate in Surgery.

CHESTER W. WHITE, JR., M.D., Associate in Anaesthesia at the Boston Lying-in Hospital.

WILLIAM P. LONGMIRE, JR., M.D., Visiting Lecturer on Surgery, Harvard Medical School; Physician-in-Chief *Pro Tempore*, Peter Bent Brigham Hospital (September 16 through November 10, 1958).

HENRY H. FAXON, M.D., Lecturer on Surgery.

Adelbert Ames, III, M.D., Research Associate in Surgery.

JAMES E. ANLIKER, Ph.D., Research Associate in Anaesthesia.

C. LLOYD CLAFF, A.B., Research Associate in Surgery.

SAUL I. COHEN, Ph.D., Research Associate in Surgery.

Julius A. Goldbarg, M.D., Research Associate in Surgery.

DOROTHY H. HENNEMAN, M.D., Research Associate in Anaesthesia (resigned August 31, 1958).

DAVID S. JACKSON, Ph.D., Research Associate in Biological Chemistry in the Department of Surgery.

MELVIN M. KETCHEL, Ph.D., Research Associate in Surgery.

Selma H. Rutenburg, M.D., Research Associate in Surgery.

GENE M. SMITH, Ph.D., Research Associate in Anaesthesia. ALBERT H. Soloway, Ph.D., Research Associate in Surgery. ARTHUR L. ABRAMS, M.D., Instructor in Anaesthesia. Louis Bakay, M.D., Instructor in Surgery. BENJAMIN A. BARNES, M.D., Instructor in Surgery. SVEN E. H. BELLMAN, M.D., Instructor in Surgery. HENRIK H. BENDIXEN, M.D., Instructor in Anaesthesia. HARRISON BLACK, M.D., Instructor in Surgery. HATHORN P. Brown, M.D., Instructor in Surgery. JOHN F. BURKE, M.D., Instructor in Surgery. THOMAS K. BURNAP, M.D., Instructor in Anaesthesia. GORDON A. DONALDSON, M.D., Instructor in Surgery. WILLIAM S. EASTON, M.D., Instructor in Anaesthesia. ALBERT J. FINCK, M.D., Instructor in Anaesthesia. WILLIAM F. FLYNN, M.D., Instructor in Surgery. PHILIP S. Foisie, M.D., Instructor in Surgery. EDWARD W. FRIEDMAN, M.D., Instructor in Surgery. F. THOMAS GEPHART, M.D., Instructor in Surgery. HERMES C. GRILLO, M.D., Instructor in Surgery. PAUL F. GRYSKA, M.D., Instructor in Surgery. PHILLIPS HALLOWELL, M.D., Instructor in Anaesthesia. CARL S. HOAR, JR., M.D., Instructor in Surgery. STEPHEN J. HOYE, M.D., Instructor in Surgery. STANLEY W. JACOB, M.D., Instructor in Surgery. ANDREW G. JESSIMAN, M.B., CH.B., Instructor in Surgery. LEE G. KENDALL, M.D., Instructor in Surgery. JOHN M. KINNEY, M.D., Instructor in Surgery and Henry E. Warren Fellow in Surgery and Tutor in Medical Science. CHARLES A. LAMB, M.D., Instructor in Surgery. Samuel Lowis, M.D., Instructor in Surgery. JOHN B. McKittrick, M.D., Instructor in Surgery. S. RICHARD MUELLNER, M.D., Instructor in Surgery. Louis H. Nason, M.D., Instructor in Surgery. ARTHUR E. OGDEN, M.D., Instructor in Anaesthesia. W. Bradford Patterson, M.D., Instructor in Surgery. Louis N. Pernokas, M.D., Instructor in Surgery.

JOHN V. PIKULA, M.D., Instructor in Surgery.

WILLIAM C. QUINBY, JR., M.D., Instructor in Surgery.

GEORGE S. RICHARDSON, M.D., Instructor in Surgery.

CHESTER B. ROSOFF, M.D., Instructor in Surgery and Tutor in Medical Science.

John L. Rowbotham, M.D., Instructor in Surgery.

PAUL S. RUSSELL, Jr., M.D., Instructor in Surgery.

SAMUEL R. SCHUSTER, M.D., Instructor in Surgery.

Bernard R. Sears, M.D., Instructor in Surgery.

Arnold L. Segel, M.D., Instructor in Surgery.

Frank G. Sheddan, Jr., M.D., Instructor in Surgery.

NICHOLAS M. STAHL, M.D., Instructor in Surgery.

ARNOLD STARR, M.D., Instructor in Surgery.

NAAMAN STEINBERG, M.D., Instructor in Surgery.

Howard I. Suby, M.D., Instructor in Surgery.

Kenneth J. Welch, M.D., Instructor in Surgery.

MALVIN F. WHITE, M.D., Instructor in Surgery.

GEORGE F. WILKINS, M.D., Instructor in Surgery (resigned August 31, 1958).

JOHN A. WILLIAMS, M.D., Instructor in Surgery.

LORANDE M. WOODRUFF, M.D., Instructor in Surgery.

HART ACHENBACH, M.D., Assistant in Surgery.

JOHN R. ALGIRD, M.D., Assistant in Anaesthesia.

RICHARD C. AUSTIN, M.D., Assistant in Surgery.

James D. Ball, M.D., Assistant in Anaesthesia (appointment expired July 31, 1958).

GLENN E. BEHRINGER, M.D., Assistant in Surgery.

HAROLD BENGLOFF, M.D., Assistant in Surgery.

JESSE F. Brown, M.D., Assistant in Anaesthesia (resigned July 11, 1958).

CHARLES B. BURBANK, M.D., Assistant in Surgery.

JOHN W. CHAMBERLAIN, M.D., Assistant in Surgery.

JULIE S. CROCKER, M.D., Assistant in Anaesthesia.

ROBERT E. DESAUTELS, M.D., Assistant in Surgery.

CHESTER J. DEXTER, M.D., Assistant in Surgery.

Edward T. Gordon, M.D., Assistant in Surgery.

STANLEY K. GORDON, M.D., Assistant in Surgery. EDWARD B. GRAY, JR., M.D., Assistant in Surgery. EUGENE GURALNICK, M.D., Assistant in Surgery. HANNIBAL HAMLIN, M.D., Assistant in Surgery. IRAD B. HARDY, JR., M.D., Assistant in Surgery. HYMAN HERSHMAN, M.D., Assistant in Surgery. Sophus C. H. Johansen, M.D., Assistant in Anaesthesia. ALFRED T. JOSEPH, M.D., D.M.D., Assistant in Surgery. EDWARD KAPLAN, M.D., Assistant in Surgery. FEUNG B. LEE, M.D., Assistant in Surgery. Howard J. Lewenstein, M.D., Assistant in Surgery. JOHN B. LLOYD, M.D., Assistant in Surgery. EDWARD A. MAHONEY, JR., M.D., Assistant in Surgery. VERNON H. MARK, M.D., Assistant in Surgery. KEITH MERRILL, JR., M.D., Assistant in Surgery. CARROLL C. MILLER, M.D., Assistant in Surgery. CHARLES G. MIXTER, JR., M.D., Assistant in Surgery. EDWARD T. O'HARA, M.D., Assistant in Surgery. Donald P. Pederson, M.D., Assistant in Anaesthesia. ANNE W. PHILLIPS, M.D., Assistant in Surgery. Angelo G. Rocco, M.D., Assistant in Anaesthesia. Grant Rodkey, M.D., Assistant in Surgery. WILLIAM P. ROGERS, JR., M.D., Assistant in Surgery. LEON ROSENFELD, M.D., Assistant in Surgery. Spiros P. Sarris, M.D., Assistant in Surgery. SAMUEL SEGAL, M.D., Assistant in Surgery. JOHN SHILLITO, JR., M.D., Assistant in Surgery. PORTER H. SMITH, M.D., Assistant in Anaesthesia. ALBERT M. STARR, M.D., Assistant in Surgery. WARREN J. TAYLOR, M.D., Assistant in Surgery. PHILIP H. WALKER, M.D., Assistant in Surgery. SARITA G. WALZER, M.D., Assistant in Anaesthesia. Frank C. Wheelock, Jr., M.D., Assistant in Surgery. EARLE W. WILKINS, JR., M.D., Assistant in Surgery.

GEORGE A. ALBERTAL, M.D., Research Fellow in Surgery.

Maria E. Angers, M.D., Research Fellow in Surgery (resigned September 30, 1958).

OKAS BALANKURA, M.D., Research Fellow in Surgery.

Roy H. Clauss, M.D., Research Fellow in Surgery (resigned September 15, 1958).

PAUL DAWSON-EDWARDS, M.B., CH.B., Research Fellow in Surgery (appointment expired August 15, 1958).

HARRY V. DEMISSIANOS, M.D., Research Fellow in Surgery.

ULRICH FREIHOFFER, M.D., Research Fellow in Surgery.

STEPHEN J. GALLA, M.D., Research Fellow in Anaesthesia.

GORDON F. CASSIE, M.B., CH.B., Research Fellow in Surgery (appointment expired August 15, 1958).

JOHN S. GIANNAKAKIS, M.D., Research Fellow in Surgery.

WILLARD E. GOODWIN, M.D., Research Fellow in Surgery.

DEREK S. GORDON, M.B., CH.B., Research Fellow in Surgery (appointment expired September 30, 1958).

Andre E. J. Govaerts, M.D., Research Fellow in Surgery.

N. Alan Green, M.B., B.S., Research Fellow in Surgery.

ULRICH F. GRUBER, M.D., Research Fellow in Surgery.

GEORGE J. HILL, II, M.D., Research Fellow in Surgery.

WERNER F. ISLER, M.D., Research Fellow in Surgery (appointment expired January 15, 1959).

GILLRAY KANDEL, Ph.D., Research Fellow in Anaesthesia (resigned August 30, 1958).

WILLIAM M. KEYNES, M.D., Research Fellow in Surgery (appointment expired September 30, 1958).

PETER B. LAMBERT, M.B., CH.B., Research Fellow in Surgery.

MELVIN LEDERMAN, M.D., Research Fellow in Surgery.

ARMAND A. LEFEMINE, M.D., Research Fellow in Surgery.

ERIC H. LENNEBERG, Ph.D., Research Fellow in Psychology in the Department of Surgery.

MARIE-LOUISE LEVY, M.D., Research Fellow in Anaesthesia.

Steven Lunzer, M.D., Research Fellow in Surgery.

Antonina W. A. Marczynska, M.D., Research Fellow in Surgery. Jorge Martinez, M.D., Research Fellow in Surgery (resigned August 31, 1958).

CLAUDE J. MEYER, M.D., Research Fellow in Surgery.

TASSADDUK H. MOGHUL, M.B., Ch.B., Research Fellow in Surgery.

Francis P. Muldowney, M.B., Ch.B., Milton Research Fellow in Surgery.

JAN NIELUBOWICZ, M.D., Research Fellow in Surgery (appointment expired December 31, 1958).

Shuro Nishimura, M.D., Ph.D., Research Fellow in Surgery.

TSUTOMU OYAMA, M.D., Research Fellow in Anaesthesia (appointment expired December 31, 1958).

Hugo M. Palazzi, M.D., Research Fellow in Surgery (appointment expired December 31, 1958).

Franklin H. Pfeiffenberger, M.D., Research Fellow in Surgery.

ESTEBAN P. PINEDA, M.D., Research Fellow in Surgery.

SERGIO PIOMELLI, M.D., Research Fellow in Surgery.

Julio C. Priario, M.D., Research Fellow in Surgery (resigned September 30, 1958).

IAN RANGER, M.B., B.S., Research Fellow in Surgery (appointment expires March 31, 1959).

Ugo Ruberti, M.D., Research Fellow in Surgery.

PETER H. SANDERSON, M.B., CH.B., Research Fellow in Surgery.

HANS J. SCHWEIZER, M.D., Research Fellow in Anaesthesia.

ROLF C. SHEPHERD, M.B., CH.B., Research Fellow in Surgery.

WILLIAM C. SHOEMAKER, M.D., Research Fellow in Surgery.

ARTHUR SICULAR, M.D., Research Fellow in Surgery.

Louis L. Smith, M.D., Research Fellow in Surgery.

HARRY S. SOROFF, M.D., Research Fellow in Surgery.

SABINA J. STRICH, M.B., Ch.B., Research Fellow in Surgery (appointment expires March 31, 1959).

WENDELL B. THROWER, M.D., Research Fellow in Surgery.

L. Newton Turk, III, M.D., Research Fellow in Surgery.

LIONEL VILLAVICENCIO, M.D., Research Fellow in Surgery (appointment expired July 31, 1958).

ARTHUR W. R. WILLIAMSON, M.B., Ch.B., Research Fellow in Surgery (appointment expired September 30, 1958).

RICHARD E. WILSON, M.D., Research Fellow in Surgery.

HARVEY A. ZAREM, M.D., Research Fellow in Surgery.

ERNEST M. BARSAMIAN, M.D., Teaching Fellow in Surgery (appointment expired December 31, 1958).

GEOFFREY M. COLEY, M.D., Teaching Fellow in Surgery.

JOHN D. CONSTABLE, M.D., Teaching Fellow in Surgery.

ZOLMAN HELFAND, M.D., Teaching Fellow in Surgery.

WILLIAM H. HENDREN, III, M.D., Teaching Fellow in Surgery (appointment expired December 31, 1958).

CLEMENT A. HIEBERT, M.D., Teaching Fellow in Surgery (ap-

pointment expired July 31, 1958). THOMAS M. HOLDER, M.D., Teaching Fellow in Surgery.

J. SHELTON HORSLEY, III, M.D., Arthur Tracy Cabot Teaching Fellow in Surgery.

ERNEST S. MATHEWS, M.D., Teaching Fellow in Surgery.

ROBERT A. NEWTON, M.D., Teaching Fellow in Surgery.

RICHARD L. ROVIT, M.D., Teaching Fellow in Surgery (appointment expired August 31, 1958).

RICHARD W. STEENBURG, M.D., Arthur Tracy Cabot Teaching

Fellow in Surgery (resigned September 14, 1958). Charles E. Huggins, M.D., Moseley Junior Traveling Fellow (appointment expires May 31, 1959).

# Affiliated:

JAMES A. ANLIKER, Ph.D., Research Associate in Nutrition, S.P.H. (Anaesthesia).

# REQUIRED COURSES

Instruction will be given by amphitheatre clinics, lectures, and conferences, together with section teaching in the wards and out-patient departments of the hospitals and in the surgical research laboratories.

Surgery A. Second Year. — The course is designed to correlate preclinical sciences with the basic principles underlying the surgical management of injury and disease. The Department of Surgery joins with the Department of Medicine in a series of exercises in physical diagnosis and laboratory medicine to offer unified instruction in case taking. Practical exercises are offered that introduce the student to basic surgical techniques.

Surgery B. Third Year.—The course is conducted in the outpatient departments and wards of the hospitals affiliated with the School. The students are divided into three groups, each group in rotation being apportioned to one of the hospitals affiliated with the School for instruction in surgery over a sixty-four-day period. During this period they will study general surgery and urology at the hospital to which they are assigned, and will also receive instruction in gynecology at the Free Hospital for Women and the Massachusetts General Hospital and in laryngology at the Massachusetts Eye and Ear Infirmary. Instruction in the surgery of children is given during the pediatric section work at the Children's Hospital. Opportunity for experience in surgical operative techniques is offered in Voluntary Course 32 that may be taken in conjunction with section work.

SURGERY C. Fourth Year. — A series of not less than two months as clinical clerk in the surgical wards of the M.G.H., B.C.H., P.B.B.H., or B.I.H. is required of each student.

During the fourth year, students will be assigned to one of the departments of anaesthesia associated with the medical school. The time spent shall be sufficient to provide an introduction to the problems and possibilities of anaesthesia as a specialty of medicine. The student will acquire some knowledge of oxygen therapy, of pre- and post-operative anaesthetic care and will administer, under supervision, the commonly used anaesthetics to patients. Factors of importance in the support and resuscitation of unconscious persons will be emphasized. This experience is designed to lead to an understanding of problems associated with the safe management of individuals handicapped by pre-existing disease, by anaesthesia, and by surgery.

#### SECOND YEAR

**HOURS** 

Lectures and demonstrations on the fundamental aspects of clinical surgery and anaesthesia. Drs. Churchill, Beecher, Moore, and Associates. M.G.H. and P.B.B.H. Second half-year.

Section work, case taking, lectures and demonstrations on the physical diagnosis of surgical disease in conjunction with the Department of Medicine. M.G.H., B.C.H., P.B.B.H., and B.I.H. Each student has twenty-four exercises.

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# HARVARD UNIVERSITY THIRD YEAR

	THIRD YEAR	HOURS
Amphitheatre lectures.	Drs. Churchill, Moore,	and Associates.
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Once a week throughout the year.

38

Exercises in sections in the wards and out-patient departments at the M.G.H., P.B.B.H., and B.I.H. Each section has thirtytwo exercises of two and a half hours each and twenty-one exercises of three hours each.

141

Genito-Urinary Surgery. Section work. M.G.H., P.B.B.H., and B.I.H. Each student has ten or eleven two-and-a-half-hour exercises.

27

Children's Surgery. Section work. C.H. Each student has four one-and-a-half-hour exercises, eleven one-hour exercises, and five two-hour exercises.

27

#### FOURTH YEAR

Clinical Clerkship: M.G.H. (Surgery C1, Dr. CHURCHILL and Associates); B.C.H. (Surgery C2, Dr. Dunphy and Associates); P.B.B.H. (Surgery C<sub>3</sub>, Dr. Moore and Associates); B.I.H. Surgery C4, Dr. FINE and Associates).

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# FOURTH YEAR ELECTIVE COURSES

- 5. Children's Surgery. Dr. Gross and Associates. C.M.C. Whole course, all day. Limited to two students each month.
- 6. Vascular and Gastrointestinal Surgery. Dr. WARREN and Associates. W.R.V.A.H. Whole course, all day. Limited to two students each month.
- 8. Genito-Urinary Surgery. Dr. HARRISON. P.B.B.H. Whole course, all day. Limited to two students each month.
- 9. Anaesthesia. Dr. Beecher. M.G.H. or Dr. Vandam, P.B.B.H. Whole course, all day. Attendance limited. Application to be made in person.
- 10. Neurosurgery. Dr. J. C. White and Associates. M.G.H. or Drs. Ingraham and Matson, C.M.C. and P.B.B.H. Whole course, all day, limited to two students each month. Clinical clerkship on the neurosurgical wards.
- 20. Surgical Investigation. Dr. Moore and Associates. P.B.B.H. and H.M.S. Whole course, all day. Limited to two students

each month.

- 21. Surgical Investigation. Dr. Churchill and Associates. M.G.H. Whole course, all day.
- 22. Surgical Investigation. Dr. Dunphy and Associates, B.C.H. Whole course, all day.
- 23. Surgical Investigation. Dr. FINE and Associates, B.I.H. Whole course, all day.

#### VOLUNTARY COURSES

- 32. Surgical Technique. Members of the third year class may register for the following courses in surgical technique at the hospital to which they have been assigned for their section work.
  - 1. Operative Technique. M.G.H. Dr. C. MIXTER, JR., and Associates. Thursday afternoons throughout the year. Surgical Laboratories. May only be taken coincidentally with section work.
  - 2. Operative Technique. P.B.B.H. Dr. Walter and Associates. Thursday afternoons October 16 through January 22. Laboratory for Surgical Research, H.M.S.
  - 3. Operative Technique. B.I.H. Dr. Fine and Associates. Thursday afternoons, October 2 through November 20. Surgical Research Laboratory.
- 34. Athletic Injuries, Diagnosis and Management. Drs. Thorndike, Quigley and Associates. Tuesday and Thursday afternoons for seven weeks in September, October and November. Open to second and third year students. Limited to a total of eight students.

# Gynecology

GEORGE V. SMITH, M.D., W. H. Baker Professor of Gynecology and Head of the Department.

JOE V. MEIGS, M.D., Clinical Professor of Gynecology.

Somers H. Sturgis, M.D., Clinical Professor of Gynecology.

Howard Ulfelder, M.D., Clinical Professor Gynecology.

CHRISTOPHER J. DUNCAN, M.D., Assistant Clinical Professor of Gynecology.

Francis M. Ingersoll, M.D., Assistant Clinical Professor of Gynecology.

PAUL A. Younge, M.D., Assistant Clinical Professor of Gynecology.

ROBERT W. KISTNER, M.D., Associate in Gynecology at the Free Hospital for Women.

ALAN B. LITTLE, M.D., C.M., Associate in Gynecology and Obstetrics and Tutor in Medical Sciences.

HARRY N. ANTONIADES, Ph.D., Research Associate in Biological Chemistry in the Department of Gynecology.

OLIVE W. SMITH, Ph.D., Sc.D. (hon.), Research Associate in Gynecology.

A. GORDON GAULD, M.D., Instructor in Gynecology and in Obstetrics.

LUKE GILLESPIE, M.D., Instructor in Gynecology and Obstetrics. ARTHUR C. GORBACH, JR., M.D., Instructor in Gynecology and Obstetrics.

THOMAS H. GREEN, JR., M.D., Instructor in Gynecology.

WARD I. GREGG, M.D., Instructor in Gynecology.

RICHARD H. GROGAN, M.D., Instructor in Gynecology and Obstetrics.

CRAWFORD H. HINMAN, M.D., Instructor in Gynecology and Obstetrics.

HERBERT W. HORNE, JR., M.D., Instructor in Gynecology.

JOHN F. JEWETT, M.D., Instructor in Gynecology and Obstetrics.

WILLIAM J. MULLIGAN, M.D., Instructor in Gynecology and Obstetrics.

BARTLETT H. STONE, M.D., Instructor in Gynecology and Obstetrics.

MELVIN L. TAYMOR, M.D., Instructor in Gynecology.

ROBERT W. BROWN, M.D., Assistant in Gynecology.

RICHARD R. CURTIN, M.D., Assistant in Gynecology.

CHARLES L. EASTERDAY, M.D., Assistant in Gynecology and Obstetrics.

Celso R. Garcia, M.D., Assistant in Gynecology.

RUBY G. JACKSON, M.D., C.M., Assistant in Gynecology and Obstetrics.

ALBERT Y. KERVORKIAN, M.D., Assistant in Gynecology.

Joseph H. Phillips, M.D., Assistant in Gynecology.

ARTHUR W. TUCKER, JR., M.D., Assistant in Gynecology and in Obstetrics.

Luis Fernandez-Cano, M.D., Research Fellow in Gynecology (appointment expired December 31, 1958).

GORDON P. GRIGGS, M.D., Research Fellow in Gynecology.

JOHN T. HARRIGAN, JR., M.D., Research Fellow in Gynecology (appointment expired December 31, 1958).

PHILIP A. CORFMAN, M.D., Teaching Fellow in Gynecology (ap-

pointment expires March 31, 1959).

STANLEY W. KENT, M.D., Teaching Fellow in Gynecology (appointment expired December 31, 1958).

#### Affiliated:

SAMUEL B. KIRKWOOD, M.D., S.D. (hon.), Clinical Professor of Maternal Health, S.P.H.

#### REQUIRED COURSES

GYNECOLOGY A. Second Year. — Whole class exercises in conjunction with the Departments of Physiology, Biochemistry, Pathology and Obstetrics, covering the broad aspects of the pathophysiology of reproduction and of femaleness from infancy to senility.

GYNECOLOGY B. Third Year. — This course consists of instruction in out-patient clinics, lectures and seminars and is given with obstetrics. Emphasis is placed on history-taking, examination and the

diagnosis and treatment of diseases peculiar to women.

GYNECOLOGY C. Fourth Year. This course is given with obstetrics. It includes history-taking, examinations, teaching clinics and ward rounds, instruction in the operating rooms and in gynecological pathology and conferences on the correlation of clinical data with pathology.

#### SECOND YEAR

HOURS

Lectures on the pathophysiology of reproduction and femaleness. Drs. Hertig, Reid, Smith, Sturgis, Ulfelder, Villee and Knobil. H.M.S. These are integrated into the new program of instruction.

#### THIRD YEAR

Lectures on Abnormal Gynecology. Drs. SMITH, MEIGS, UL-FELDER, YOUNGE, McARTHUR and KISTNER. B.L.I.H. Among the regular 8.30 a.m. lectures.

6

HOURS

B1. Practical instruction in Clinical Gynecology. Drs. SMITH, STURGIS, TENNEY, ULFELDER and Associates. In the out-patient departments of the B.C.H., F.H.W., M.G.H. and P.B.B.H. In sections, throughout the year. Each student attends thirteen exercises.

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B2. Drs. Smith, Sturgis, Ulfelder and Associates. Seminars, among those given by the Department of Obstetrics, Mondays and Wednesdays, 3.30 to 5.30 p.m. throughout the year. Each student takes part in five seminars given by this Department.

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#### FOURTH YEAR

Clinical Gynecology. Drs. Smith, Tenney, Ulfelder and Associates. B.C.H., F.H.W., and M.G.H. In sections during two weeks of the fourth-year month of obstetrics.

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#### FOURTH YEAR ELECTIVE COURSE

Gynecology. Dr. Sturgis and Associates. P.B.B.H. Whole course, all day. Limited to one student each month.

# Orthopedic Surgery

JOSEPH S. BARR, M.D., John Ball and Buckminster Brown Clinical Professor of Orthopedic Surgery and Head of the Department at the Massachusetts General Hospital.

WILLIAM T. GREEN, M.D., Clinical Professor of Orthopedic Surgery and Head of the Department at The Children's Hospi-

tal.

EDWIN F. CAVE, M.D., Assistant Clinical Professor of Orthopedic Surgery.

Отто E. Aufranc, M.D., Clinical Associate in Orthopedic Sur-

ALBERT H. BREWSTER, M.D., Clinical Associate in Orthopedic Surgery.

Thornton Brown, M.D., Associate in Orthopedic Surgery at the Massachusetts General Hospital.

Jonathan Cohen, M.D., Associate in Orthopedic Surgery at The Children's Hospital.

MEIER KARP, M.D., Clinical Associate in Orthopedic Surgery.

HENRY H. BANKS, M.D., Instructor in Orthopedic Surgery.

THOMAS F. BRODERICK, JR., M.D., Instructor in Orthopedic Surgery.

THOMAS L. DE LORME, M.D., Instructor in Orthopedic Surgery. WILLIAM A. ELLISTON, M.B., CH.B., Instructor in Orthopedic Surgery.

PAUL W. HUGENBERGER, M.D., Instructor in Orthopedic Surgery. WILLIAM N. JONES, M.D., Instructor in Orthopedic Surgery.

ROBERT J. JOPLIN, M.D., Instructor in Orthopedic Surgery.

JOHN G. KUHNS, M.D., Sc.D., Instructor in Orthopedic Surgery. J. Drennan Lowell, M.D., Instructor in Orthopedic Surgery.

WILLIAM R. MACAUSLAND, JR., M.D., Instructor in Orthopedic Surgery.

RICHARD A. MAYO, M.D., Instructor in Orthopedic Surgery.

ROBERT H. MORRIS, M.D., Instructor in Orthopedic Surgery.

PAUL L. NORTON, M.D., Instructor in Orthopedic Surgery.

EUGENE E. RECORD, M.D., Instructor in Orthopedic Surgery.

JOHN A. REIDY, M.D., Instructor in Orthopedic Surgery.

CARTER R. Rowe, M.D., Instructor in Orthopedic Surgery.

Morten Smith-Petersen, M.D., Instructor in Orthopedic Surgery.

ARTHUR W. TROTT, M.D., Instructor in Orthopedic Surgery.

ROBERT ULIN, M.D., Instructor in Orthopedic Surgery.

Frank Dudley Bates, M.D., Assistant in Orthopedic Surgery at The Children's Hospital.

ROBERT B. BRENDZE, M.D., Assistant in Orthopedic Surgery.

WILLIAMS COCHRAN, M.D., Assistant in Orthopedic Surgery.

Louis Nathan, M.D., Assistant in Orthopedic Surgery.

ALAN D. WEINER, M.D., Assistant in Orthopedic Surgery.

Brendan J. Dooley, M.B., B.S., Teaching Fellow in Orthopedic Surgery (appointment expired December 31, 1958).

PAUL P. GRIFFIN, M.D., Teaching Fellow in Orthopedic Surgery. ROBERT E. KEY, M.D., Teaching Fellow in Orthopedic Surgery (appointment expired December 31, 1958).

GEORGE D. STILWILL, M.D., Teaching Fellow in Orthopedic Surgery (appointment expires March 31, 1959).

SHEN K. WANG, M.D., Teaching Fellow in Orthopedic Surgery.

### REQUIRED COURSE

ORTHOPEDIC SURGERY A. Third Year. — Instruction is given in orthopedic surgery by lectures at the Children's Medical Center and the Massachusetts General Hospital in the first half of the third year, and throughout the third year by clinical exercises at the Children's Medical Center, the Massachusetts General Hospital, the Peter Bent Brigham Hospital, and the Beth Israel Hospital.

#### THIRD YEAR

HOURS

Lectures. Drs. Barr, Green and Associates. C.M.C. 8 Clinical exercises. Drs. Barr, Green and Associates. M.G.H.,

C.M.C., P.B.B.H., and B.I.H. In sections throughout the year. 65 Thirty of these hours are clinical exercises in orthopedic surgery and industrial surgery of adults which are correlated with clinical exercises in general surgery at the Massachusetts General Hospital, the Peter Bent Brigham Hospital and the Beth Israel Hospital during the surgery assignment to these hospitals. Thirty-five hours are clinical exercises in general and pediatric orthopedic surgery at the Children's Medical Center.

#### FOURTH YEAR

Clinical exercises and assignments are provided in correlation with the prescribed general surgical course at the P.B.B.H.

# FOURTH YEAR ELECTIVE COURSES

- 1. Clinical Course. Dr. BARR and Associates. M.G.H. Whole course, all day. Limited to two students each month.
- 2. Clinical Course. Dr. Green and Associates. C.M.C. Whole course, all day. Limited to two students each month.

3. Clinical Course. Drs. Green, Barr and Associates. C.M.C. and M.G.H. Whole course, all day. Limited to two students each month.

# Otology and Laryngology

LEROY A. SCHALL, M.D., A.M. (hon.), S.D. (hon.), Walter Augustus Lecompte Professor of Otology and Professor of Laryngology and Head of the Department.

Moses H. Lurie, D.M.D., M.D., Assistant Clinical Professor of

Otology.

John R. Richardson, M.D., Assistant Clinical Professor of Laryngology.

Francis L. Weille, M.D., Assistant Clinical Professor of Otology.

PHILIP E. MELTZER, M.D., Lecturer on Otology.

ROBERT S. GOHD, Ph.D., Research Associate in Bacteriology and Immunology in the Department of Otolaryngology.

Walter A. Rosenblith, Ing. Rad., Research Associate in Otology.

Hugo D. Angelini, M.D., Instructor in Otology.

Walter J. E. Carroll, M.D., Instructor in Laryngology.

Joshua C. Drooker, M.D., Instructor in Laryngology.

MAURICE G. EVANS, M.D., Instructor in Laryngology.

CHARLES F. FERGUSON, M.D., Instructor in Otolaryngology.

CARLYLE G. FLAKE, M.D., Instructor in Laryngology.

Edgar M. Holmes, M.D., Instructor in Otology.

CHARLES KENT, M.D., Instructor in Laryngology.

Robert E. Klotz, M.D., Instructor in Otology.

Donald K. Lewis, M.D., Instructor in Otolaryngology.

WILLIAM W. MONTGOMERY, M.D., Instructor in Otology.

WERNER MUELLER, M.D., Instructor in Laryngology and in Otology.

George F. Reed, M.D., Instructor in Laryngology.

LYMAN G. RICHARDS, M.D., Instructor in Laryngology.

Louis D. Griffey, M.D., Assistant in Otolaryngology.

VINCENT J. KELLEY, M.D., Assistant in Laryngology.

Nelson Y. Kiang, Ph.D., Assistant in Otology.

Albert W. Koch, Ed.D., Assistant in Otology.

Joseph Lentine, M.D., Assistant in Laryngology.

Aram Roopenian, M.D., Assistant in Otology.

Herman J. Sternstein, M.D., Assistant in Laryngology.

Don J. Weekes, M.D., Assistant in Otology and Laryngology.

# Affiliated:

ALEXANDER S. MACMILLAN, M.D., Clinical Associate in Radiology. John S. Irwin, M.D., Research Associate in Microcirculation.

### REQUIRED COURSES

Otology and Laryngology A. Third Year. — Instruction is given by lectures at the Harvard Medical School and clinical instruction in the third year in sections, each student receiving instruction every morning for two weeks at the M.E.E.I.

	2200110
Clinical exercises. Dr. Schall and Associates. M.E.E.I. T	en or
eleven exercises for each student.	30
Lectures in Otology. Dr. Lurie. H.M.S.	5
Lectures in Laryngology. Dr. Schall. H.M.S.	5

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HOURS

# FOURTH YEAR ELECTIVE COURSES

- 1. Clinical Otology. Dr. Schall and Associates. M.E.E.I. Half-course, mornings, offered throughout the year.
- 2. Clinical Laryngology. Dr. Schall and Associates. M.E.E.I. Half-course, mornings, offered throughout the year.

(These courses are limited to two students each month.)

#### **Dental Medicine**

The following course is offered to students in The Medical School —

# VOLUNTARY COURSE

30. Diagnosis of Oral Diseases. Dr. Weisberger and Staff. November and December, Monday through Friday, 10 to 12 a.m. at the Dental Clinic, M.G.H. Open to third and fourth year students. Limited to three students.



# TABULAR VIEW OF SCHEDULES AND REGISTRATION

September 15, 1958 — June 11, 1959

SECOND SEMESTER

FIRST SEMESTER

# FIRST YEAR

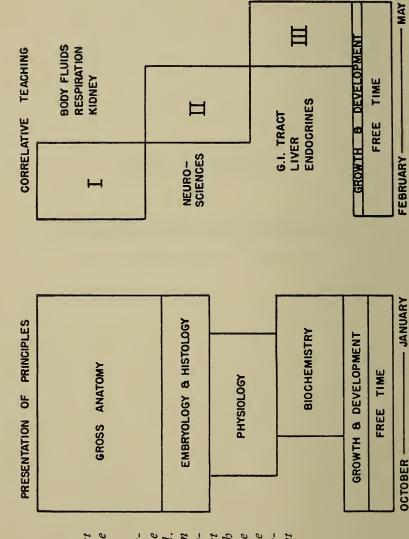
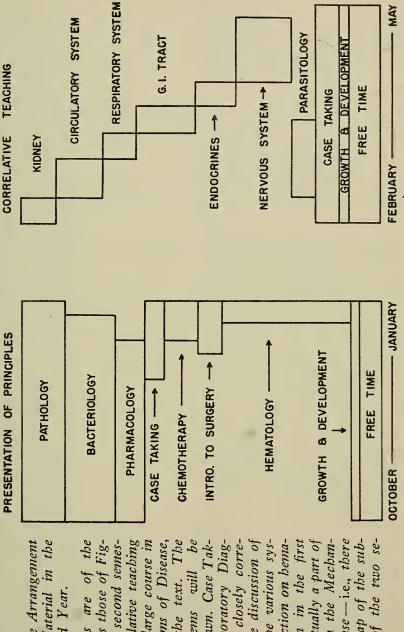


Figure 1. The Arrangement of Course Material in the First Year.

In each semester, the sequential arrangement of the course material is presented. The area of each block in each semester diagram represents the relative amount of time allocated to each subject. Comparisons of time allocated to topics may be made only within each separate semester diagram, but not between diagrams.

of Course Material in the FIGURE 2. The Arrangement Second Year.

ing and Laboratory Diag-nosis will be closely correisms of Disease - i.e., there is some overlap of the subject matter of the two sevarious systems will be diseases of the various sys-The diagrams are of the same nature as those of Figure 1. In the second semester, the correlative teaching consists of a large course in the Mechanisms of Disease, outlined in the text. The treated as shown. Case Taklated with the discussion of tems. The section on hematology shown in the first semester is actually a part of the course in the Mechan-



SECOND SEMESTER

FIRST SEMESTER

# THIRD YEAR

SATURDAY	Lecture	l. Med. Spec.* I. Medicine II. Medicine of Class: I. Surg. Spec.† III. Surgery of Class: A class: A corpopadic A corpopadic A corpopadic B cology Dobtetrics \$ Cobstetrics \$ Cobstetrics \$ Coboted Cophthalmology	FREE
FRIDAY	Lecture	f of Class: I. Medicine II. Med. Spec.* J of Class: I. Surgers. Fediatrics A Crihopaedic Surgery Cothopaedic	Lecture Preventive Medicine 2-5 (Oct. 24-Jan. 30) Legal Medicine 4.15-5.15
THURSDAY	Lecture	l. Med. Spec.* II. Medicine II. Medicine II. Surg. Spec.† II. Surgery Jof Class: Chediatrics A Orthopaedic Surgery Cobsterrics \$ B Otology Ophthalmology	FREE
Wednesday	Lecture	l. Medicine II. Med. Spec.* I. Med. Spec.* I. Surgery II. Surg. Spec.† j of Class: Chrhopaedic Surgery Obstetrics A Orthopaedic Surgery Obstetrics § B Otology	d Class: Medicine of Class: Surgery of Class:  Pediatrics  Cotthopaedic Surgery
TUESDAY	Lecture	l Med. Spec.*  II. Medicine II. Medicine Jef Class: I. Surge Spec.† II. Surgery Jof Class: A Orthopaedic Surgery A Orthopaedic Surgery Cobstetrics § B Otology Ophthalmology	FREE
Monday	Lecture	of Class: I. Medicine II. Med. Spec.* j of Class: I. Surgery II. Surg. Spec.† j of Class: A Corhopaedic Surgery Cohthalmology B Cololgy	d of Class: Medicine d of Class: Surgery d of Class: Pediatrics Corthopaedic Surgery
Hour	8.30-9.30	10-1	2–5

† Surg. Spec. = Genito-Urinary Surgery, Gynecology, Laryngology. For this course the students are assigned to the B.L.I., B.C.H., or the P.L.I. and are on duty for a period of ten or eleven days. Med. Spec. = Neurology, Psychiatry, Dermatology.

The Class is divided into thirds and the Medical and Surgical thirds are made up of two groups: Group I. — Having Medicine or Surgery on Mondays, Wednesdays and Fridays and the Medical or Surgical specialties on Tuesdays, Thursdays and

Group II. - Having Medicine or Surgery on Tuesdays, Thursdays and Saturdays and the Medical or Surgical specialties on Mondays, Wednesdays Saturdays.

and Fridays.

The Third having Pediatrics, etc., is made up of Divisions A and B. These Divisions interchange every 32 days.

The Thirds interchange every 64 days.

Holidays: Oct. 13; Nov. 11; Nov. 27; Feb. 23; May 30. Vacations: Dec. 21, 1958-Jan. 4, 1959; April 12-19, 1959.

Examination Period: June 1-6.

# FOURTH YEAR

(Each block represents one month. Order of subjects variable.)

	1	2	3	4
Morning Afternoon	Medicine C1, C2, C3, or C4	Medicine C1, C2, C3, or C4	Surgery C1, C2, C3, or C4*	Surgery C1, C2, C3, or C4*
	5	6	7	8 .
Morning Afternoon	Obstetrics Cl	Pediatrics Cl or C2	Psychiatry Cl, C2, or C3	Elective

In addition to the eight months' required work, each student may elect courses for three additional months by anticipating work during the summer months.

\* October to May.

On June 12, 1958, One Hundred and Thirty-Five Degrees Were Conferred as Follows:

#### M.D.

HOWARD EUGENE ADKINS, A.A. (Boise Jr. Coll.) 1953.

PETER DUNHAM ALDEN

NICHOLAS RIOCH ANTHONISEN, A.B. (Dartmouth Coll.) 1955.

JOHN FORD BARLOW, A.B. (Dartmouth Coll.) 1955.

BARTON ALEXANDER BROWN, A.B. (Univ. of California) 1954.

JOHN STEVER BRYAN, JR., A.B. (Dartmouth Coll.) 1955.

Donald Englund Butterfield, A.B. (Univ. of Chicago) 1953.

PETER RICHARD BRIGGS CALDWELL, A.B. (Dartmouth Coll.) 1954.

Paul Jude Cannon, A.B. (Coll. of the Holy Cross) 1954.

CHARLES BERNARD CARPENTER, A.B. (Dartmouth Coll.) 1955.

Hugh Pollard Chandler, a.B. 1954.

ALLEN WILLIAMS CHEEVER, A.B. (Carleton Coll.) 1954.

David Dean Christensen, s.B. (Univ. of Utah) 1952.

Calvin John Collins, a.B. (Williams Coll.) 1954.

RICHARD GORDON COOPER, A.B. (Dartmouth Coll.) 1955.

C. PINCKNEY DEAL, JR., A.B. (Duke Univ.) 1952, S.M. (Wake Forest Coll.) 1954.

WILLIAM RAY DECESARE, A.B. (Dartmouth Coll.) 1955.

Prentiss Maurice Dettman, a.B. (Albion Coll.) 1954.

John Robert Edwards, A.B. (Dartmouth Coll.) 1955.

Günes Nurettin Ege, A.B. (American Coll. for Girls) 1952, A.B. (Barnard Coll.) 1954.

ELIZABETH ANNE EILERS, A.B. (Radcliffe Coll.) 1954.

WILLIAM LUKENS ELKINS, A.B. (Princeton Univ.) 1954.

Angelo John Eraklis, A.B. (Bowdoin Coll.) 1954.

PATTISON ESMIOL, A.B. 1954.

DAVID STUART FEINGOLD, A.B. 1954.

Peter Leslie Frommer, e.e. (Univ. of Cincinnati) 1954.

PETER PAUL GEBEL, S.B. (Rutgers Univ.) 1954.

George Hussey Gifford, Jr., A.B. 1952.

MURRAY AUSTIN GOLDSTONE, A.B. (Hamilton Coll.) 1954.

STEPHEN BENYAS GOODMAN

JOACHIM STEFAN GRAVENSTEIN, M.D. (Univ. of Bonn) 1951.

SARA SHEILA HAFTER, A.B. (Brooklyn Coll.) 1950, A.B. (New School for Social Research) 1954.

EDWARD MAURICE HALEY, A.B. (Dartmouth Coll.) 1955.

JAMES WHITNEY HALL, 3D, A.B. (Dartmouth Coll.) 1955.

Hugh Smith Harris, Jr., s.B. (Univ. of Mississippi) 1956.

JEANNETTE HATFIELD, B.SC. (McGill Univ.) 1954.

RICHARD CLARK HIRSCHHORN, A.B. 1954.

Myron Arms Hofer, 2D, A.B. 1954.

WILLIAM BOYD HOOD, JR., S.B. (Davidson Coll.) 1954.

Christian Berend Johann von Hoyningen-Huene, a.B. (Bowdoin Coll.) 1954.

BERNARD THOMAS HUTCHINSON, A.B. (West Virginia Univ.) 1955, S.B. (ibid.) 1956.

RICHARD CHAPELL HUTCHINSON, A.B. 1952.

JORDAN JOSEPH, A.B. 1954.

CHARLES SIGMOND KAHN, A.B. 1954.

MARTIN KANTOR, A.B. (Brown Univ.) 1954.

ROBERT DAVID KARLAN, S.B. (Univ. of Wisconsin) 1954.

KIRBY LANGSTON CHANDLER VON KESSLER, A.B. 1954.

ARNOLD IMMANUEL KISCH, A.B. (Columbia Univ.) 1954.

Sven Jüri Kister, A.B. (Dartmouth Coll.) 1955.

HOWARD MYRON KREMEN, A.B. (Univ. of Chicago) 1952.

ANITA MARIE LAMIE, S.B. (Univ. of New Hampshire) 1954.

DAVID J LANG, A.B. (Swarthmore Coll.) 1954.

John Kung-Hsien Li, A.B. 1954.

Leila Liebman, s.B. (Tufts Univ.) 1954.

CHARLES SIDNEY LIPSON, A.B. 1954.

JOHN BENNETT LIVINGSTONE, A.B. (Brown Univ.) 1954.

JOHN NEVIUS LUKENS, JR., A.B. (Princeton Univ.) 1954.

GENE EDISON LYNN, A.B. (Univ. of Illinois) 1952, ED.M. (ibid.) 1954.

NORMAN EAKES MATTHEWS, A.B. (Haverford Coll.) 1954.

Ronald James Messer, a.B. 1954.

ELLIOTT VAUGHN MILLER, S.B. (Denison Univ.) 1954.

John Joseph Monahan, A.B. (Dartmouth Coll.) 1954.

CLARENCE LORENZO MORGAN, S.B. (Tufts Univ.) 1954.

EDWARD EVERETT MORSE, A.B. 1954.

ROBERT LAWRENCE MORSE, A.B. (Dartmouth Coll.) 1955.

PHILIP LLEWELLYN MOSSMAN, A.B. (Dartmouth Coll.) 1955.

WALTER ELMORE NANCE, S.B. (Univ. of the South) 1954.

Bernard Dave Nidus, A.B. (Columbia Univ.) 1953.

Walter Morris Hart Noble, a.B. 1954.

Taras Nowosiwsky, A.B. (Columbia Univ.) 1955.

Wolfgang Walter Oppelt, A.B. (Univ. of North Dakota) 1955, s.B. (ibid.) 1956.

Albert Cushman Parker, Jr., A.B. (Columbia Univ.) 1954.

VERNON DUANE PATCH, A.B. 1951.

SYDNOR BARKSDALE PENICK, 3D, A.B. (Princeton Univ.) 1954.

John Thomas Porvaznik, Jr., A.B. (Dartmouth Coll.) 1955.

SEYMOUR RABINOWITZ, A.B. (Wesleyan Univ.) 1954.

GLENN HUBBARD RANDALL, S.B. (Antioch Coll.) 1954.

Howard James Ricketts, a.B. (Oberlin Coll.) 1954.

RICHARD EDGAR RIESELBACH, S.B. (Univ. of Wisconsin) 1955.

Stephen Howard Robinson, a.B. 1954.

ALLEN WILLIAM ROOT, A.B. (Dartmouth Coll.) 1955.

ROBERT STANLEY ROSSON, A.B. (Wesleyan Univ.) 1954.

DAVID GEORGE SATIN, A.B. (Princeton Univ.) 1954.

PETER HENRY SCHUR, S.B. (Yale Univ.) 1955.

PHILIP WELLS SHAMBAUGH, A.B. 1954.

ROBERT WILLIAM SHAVELSON, A.B. (Princeton Univ.) 1954.

BENJAMIN VERGON SMITH, JR., A.B. (Princeton Univ.) 1954.

IRENE LEIDER SOLOMON, A.B. (Radcliffe Coll.) 1954.

CHARLES SOLOW, A.B. 1954.

LYMAN EDWIN SPROUL, JR., A.B. 1954.

JOHN ALLEN STANLEY, A.B. (Dartmouth Coll.) 1955.

RODMAN DAVID STARKE, A.B. (Williams Coll.) 1954.

WILLIAM HENRY SULLIVAN, A.B. (Boston Coll.) 1954.

Robert Haskell Tichell, A.B. 1954.

JEREMIAH GODFREY TILLES, A.B. 1954.

JOSEPH CHAPMAN TODD, S.B. (Univ. of Mississippi) 1956.

Kenneth Alan Tollackson, a.B. (Whitman Coll.) 1954.

EARL BRUCE TRUCKER, A.B. 1954.

JOHN FRANCIS TULENKO, A.B. 1954.

ROBERT BORIS ULLIAN, A.B. 1954.

Laurence Neil Unger, A.B. (Cornell Univ.) 1954.

CHARLES ROBERT VALERI, S.B. (Tufts Univ.) 1954.

Stephen Lightner Wangensteen, A.B. (Univ. of Minnesota) 1955.

LEWIS ROBERT WEINTRAUB, A.B. (Dartmouth Coll.) 1955.

Roy Christopher Anthony Weatherley White, B.A. (Cambridge Univ.) 1953, M.A. (ibid.) 1957.

JAMES WALKER WIGGIN, JR., A.B. (Dartmouth Coll.) 1955.

SANFORD WOLFSON, A.B. (Williams Coll.) 1954. HARRY WOLLMAN, A.B. 1954. DAVID SAMUEL ZIMMON.

M.D. cum laude for Thesis in a Special Field

Martin Jay Cline. Allan Kliman, a.b. 1954. Sergei Pitirimovitch Sorokin, a.b. 1954.

M.D. cum laude Joe Claude Bennett, A.B. (Howard Coll.) 1954. SHEILA BIERMAN BLUME PHYLLIS TUCK BODEL, A.B. (Radcliffe Coll.) 1954. STANLEY PAUL BOHRER, A.B. (Univ. of Michigan) 1954. Ioseph Warren Burnett, A.B. (Yale Univ.) 1954. CECIL HAMMOND COGGINS, A.B. (Yale Univ.) 1954. Myron William Conovitz, A.B. (Yale Univ.) 1954. Howard Alan Corwin, A.B. 1954. DAVID ELAM DRUM, S.B. (Washington & Lee Univ.) 1954. ROBERT BROFF GILMAN, A.B. (Western Reserve Univ.) 1953. STEPHEN JAMES HEALEY, 3D, A.B. 1954. HARRY SAMUEL JACOB, A.B. (Reed Coll.) 1954. GEORGE ALONZO JACOBY, JR., A.B. (Yale Univ.) 1954. LEWIS PAUL JAMES, JR., A.B. (Yale Univ.) 1954. JOHN WILLIAM MADDEN, S.B. (Yale Univ.) 1955. ANTHONY SEAVEY PATTON, A.B. 1954. Don Chester Pearl, Jr., s.B. (Univ. of Washington) 1955. RUDOLPH WALTER PIERCE, S.B. (U.S. Naval Academy) 1951. ADRIANNE ELLEFSON ROGERS, A.B. (Radcliffe Coll.) 1954. RICHARD LUBER SOFFER, A.B. (Amberst Coll.) 1954. EDMUND HIRAM SONNENBLICK, A.B. (Wesleyan Univ.) 1954. Wolfgang Lawrence Wilde, A.B. 1954. THORNE SHERWOOD WINTER, 3D.

# CLASS OF JUNE 1958 INTERNSHIPS

Unless otherwise noted all *internships* start July 1, 1958, for one year.

Name	Hospital (and location)	Service
Adkins, Howard E.	State Univ. of Iowa, Iowa City, Iowa	Rotating
Alden, Peter D.	New York Hospital, New York City	Medicine
Anthonisen, Nicholas R.	North Carolina Memorial, Chapel Hill, N.C.	Medicine
Barlow, John F.	Mary Imogene Bassett, Cooperstown, N.Y.	Rotating
Bennett, Joe C.	Univ. Hosp. & Hillman, Birming- ham, Ala.	Medicine
Blume, Sheila B.	Children's Medical Center, Boston	Pediatrics
Bodel, Phyllis T.	Boston City (Harvard Service), Boston	Medicine
Bohrer, Stanley P. Brown, Barton A.	Massachusetts General, Boston U. of California, San Francisco,	Surgery
Bryan, John S., Jr.	Calif. Grace-New Haven Community,	Surgery
,	New Haven, Conn.	Surgery
Burnett, Joseph W. Butterfield, Donald	Johns Hopkins, Baltimore, Md. Boston City (Harvard Service),	Medicine
E. Caldwell, Peter R. B.	Boston Bellevue (I DivColumbia U.),	Surgery
Cannon, Paul J.	New York City Presbyterian, New York City	Mixed Medicine
Carpenter, Charles	Bellevue (2d DivCornell U.),	
B. Chandler, Hugh P.	New York City U. of California, Los Angeles,	Medicine
Cheever, Allen W.	Calif. Mt. Sinai, New York City	Surgery Rotating
Christensen, David D.	University Hospitals, Cleveland, Ohio	Medicine
Cline, Martin J.	Peter Bent Brigham, Boston	Medicine

Name	Hospital (and location)	Service
Coggins, Cecil H. Collins, Calvin J.	Massachusetts General, Boston Strong Memorial, Rochester, N.Y.	Medicine Surgery
Conovitz, Myron W.	Peter Bent Brigham, Boston	Medicine
	Buffalo General, Buffalo, N.Y.	Rotating
_	Peter Bent Brigham, Boston	Medicine
	Mary Hitchcock Memorial, Han-	
R.	over, N.H.	Rotating
Deal, C. Pinckney,	New York Hospital, New York	
Jr.	City	Medicine
	University Hospitals, Columbus,	
M	Ohio	Surgery
Drum, David E.	Med. Coll. of Virginia, Richmond,	C
Edmands John D	Va.	Surgery
Edwards, John R.	Mary Imogene Bassett, Cooperstown, N.Y.	Rotating
Ege, Günes N.	Pennsylvania, Philadelphia, Pa.	Rotating
Eilers, Elizabeth A.	Massachusetts Memorial, Boston	Medicine
Elkins, William L.	St. Vincents, New York City	Surgery
Eraklis, Angelo J.	Peter Bent Brigham, Boston	Surgery
Esmiol, Pattison	Strong Memorial, Rochester, N.Y.	*Rotating
Feingold, David S.	Beth Israel, Boston	Medicine
Frommer, Peter L.	Cincinnati General, Cincinnati,	
	Ohio	Rotating
Gebel, Peter P.	Pennsylvania, Philadelphia, Pa.	Rotating
Gifford, George H.,	Dana Dana Daighana Danan	C
Jr.	Peter Bent Brigham, Boston	Surgery Medicine
Gilman, Robert B. Goldstone, Murray	Peter Bent Brigham, Boston University Hospitals, Cleveland,	Medicine
A.	Ohio	Medicine
Goodman, Stephen		
В.	Colorado General, Denver, Colo.	Rotating
Gravenstein, Joa-	U. of Florida Med. Sch., Gaines-	
chim S.	ville, Fla.	Anesthesia
Hafter, S. Sheila	Saint Elizabeths, Washington, D.C.	Rotating
Haley, Edward M.	Strong Memorial, Rochester, N.Y.	Surgery

<sup>\*</sup> Two-year appointment.

Name	Hospital (and location)	Service
Hall, James W., 3d	U. of Minnesota, Minneapolis, Minn.	Medicine
Harris, Hugh S., Jr. Hatfield, Jeannette Healey, Stephen J.,	Barnes, St. Louis, Mo. Strong Memorial, Rochester, N.Y.	Surgery Pediatrics
3d	Peter Bent Brigham, Boston University Hospital, Cleveland,	Surgery
ard C.	Ohio	Surgery
Hofer, Myron A., 2d Hood, William B.,	Massachusetts General, Boston	Medicine
Jr. Hutchinson, Ber-	Peter Bent Brigham, Boston	Medicine
nard T. Hutchinson, Rich-	Pennsylvania, Philadelphia, Pa.	Rotating
ard C.	Boston City, Boston Boston City (Harvard Service),	Pathology
Jacoby Coorge A	Boston City (Harvard Service),	Medicine
Jacoby, George A., Jr.	Massachusetts General, Boston	Medicine
James, Lewis P., Jr. Joseph, Jordan	Massachusetts General, Boston Vanderbilt U., Nashville, Tenn.	Surgery Medicine
Kahn, Charles S.	Univ. Hosp. & Hillman, Birmingham, Ala.	Rotating
Kantor, Martin	Univ. of Chicago Clinics, Chicago, Ill.	Medicine
Karlan, Robert D.	Univ. of Chicago Clinics, Chicago, Ill.	Rotating
Kisch, Arnold I.	Grace-New Haven Community, New Haven, Conn.	Surgery
Kister, Sven J. Kliman, Allan	Presbyterian, New York City Beth Israel, Boston	Surgery Medicine
Kremen, Howard M.	Boston City (Harvard Service), Boston	Medicine
Lamie, Anita M.	University Hospitals, Columbus, Ohio	Medicine
Lang, David J.	Beth Israel, Boston	Medicine

Name	Hospital (and location)	Service
Li, John K.	Bellevue (1st DivColumbia U.), N.Y.C.	Mixed
Liebman, Leila	Johns Hopkins, Baltimore, Md.	Medicine
Lipson, Charles S.	Beth Israel, Boston	Surgery
Livingstone, John B.	U. of Minnesota, Minneapolis, Minn.	Surgery
Lukens, John M., Jr.	North Carolina Memorial, Chapel Hill, N.C.	Mixed
Lynn, Gene E.	Indiana Univ. Med. Center, Indian-	
	apolis, Ind.	Rotating
Madden, John E.	Massachusetts General, Boston	Surgery
Matthews, Norman E.	Cincinnati General, Cincinnati, Ohio	Rotating
Messer, Ronald J.	Roosevelt, New York City	Mixed
Miller, Elliott V.	University Hospitals, Columbus,	
Ml I.l I	Ohio	Surgery
Monahan, John J.	Mary Hitchcock Memorial, Hanover, N.H.	Rotating
Morgan, Clarence		
		X 1 1
L. Morse Edward E	Beth Israel, Boston  Johns Honkins Baltimore Md	Medicine Medicine
Morse, Edward E.	Johns Hopkins, Baltimore, Md.	Medicine Medicine
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Morse, Edward E.	Johns Hopkins, Baltimore, Md. Univ. of Chicago Clinics, Chicago, Ill. Hospital of U. of Penn., Philadel-	Medicine Rotating
Morse, Edward E. Morse, Robert L.	Johns Hopkins, Baltimore, Md. Univ. of Chicago Clinics, Chicago, Ill.	Medicine
Morse, Edward E. Morse, Robert L.  Mossman, Philip L.  Nance, Walter E. Nidus, Bernard D.	Johns Hopkins, Baltimore, Md. Univ. of Chicago Clinics, Chicago, Ill. Hospital of U. of Penn., Philadel- phia, Pa. Vanderbilt Univ., Nashville, Tenn. City Hospital, Cleveland, Ohio	Medicine Rotating Rotating
Morse, Edward E. Morse, Robert L. Mossman, Philip L. Nance, Walter E.	Johns Hopkins, Baltimore, Md. Univ. of Chicago Clinics, Chicago, Ill. Hospital of U. of Penn., Philadelphia, Pa. Vanderbilt Univ., Nashville, Tenn. City Hospital, Cleveland, Ohio North Carolina Memorial, Chapel Hill, N.C.	Medicine Rotating Rotating Medicine
Morse, Edward E. Morse, Robert L.  Mossman, Philip L.  Nance, Walter E. Nidus, Bernard D.	Johns Hopkins, Baltimore, Md. Univ. of Chicago Clinics, Chicago, Ill. Hospital of U. of Penn., Philadel- phia, Pa. Vanderbilt Univ., Nashville, Tenn. City Hospital, Cleveland, Ohio North Carolina Memorial, Chapel	Medicine Rotating Rotating Medicine Rotating
Morse, Edward E. Morse, Robert L.  Mossman, Philip L.  Nance, Walter E. Nidus, Bernard D. Noble, Walter M.  Nowosiwsky, Taras  Oppelt, Wolfgang	Johns Hopkins, Baltimore, Md. Univ. of Chicago Clinics, Chicago, Ill. Hospital of U. of Penn., Philadelphia, Pa. Vanderbilt Univ., Nashville, Tenn. City Hospital, Cleveland, Ohio North Carolina Memorial, Chapel Hill, N.C. Mary Imogene Bassett, Cooperstown, N.Y.	Medicine Rotating Medicine Rotating Medicine Rotating Medicine
Morse, Edward E. Morse, Robert L.  Mossman, Philip L.  Nance, Walter E. Nidus, Bernard D. Noble, Walter M.  Nowosiwsky, Taras  Oppelt, Wolfgang W.	Johns Hopkins, Baltimore, Md. Univ. of Chicago Clinics, Chicago, Ill. Hospital of U. of Penn., Philadelphia, Pa. Vanderbilt Univ., Nashville, Tenn. City Hospital, Cleveland, Ohio North Carolina Memorial, Chapel Hill, N.C. Mary Imogene Bassett, Coopers-	Medicine Rotating Medicine Rotating Medicine
Morse, Edward E. Morse, Robert L.  Mossman, Philip L.  Nance, Walter E. Nidus, Bernard D. Noble, Walter M.  Nowosiwsky, Taras  Oppelt, Wolfgang W.  Parker, Albert C.,	Johns Hopkins, Baltimore, Md. Univ. of Chicago Clinics, Chicago, Ill. Hospital of U. of Penn., Philadelphia, Pa. Vanderbilt Univ., Nashville, Tenn. City Hospital, Cleveland, Ohio North Carolina Memorial, Chapel Hill, N.C. Mary Imogene Bassett, Cooperstown, N.Y. Peter Bent Brigham, Boston	Medicine Rotating Medicine Rotating Medicine Rotating Medicine Rotating
Morse, Edward E. Morse, Robert L.  Mossman, Philip L.  Nance, Walter E. Nidus, Bernard D. Noble, Walter M.  Nowosiwsky, Taras  Oppelt, Wolfgang W.	Johns Hopkins, Baltimore, Md. Univ. of Chicago Clinics, Chicago, Ill. Hospital of U. of Penn., Philadelphia, Pa. Vanderbilt Univ., Nashville, Tenn. City Hospital, Cleveland, Ohio North Carolina Memorial, Chapel Hill, N.C. Mary Imogene Bassett, Cooperstown, N.Y.	Medicine Rotating Medicine Rotating Medicine Rotating Medicine

Name	Hospital (and location)	Service
Pearl, Don C., Jr.	Massachusetts General, Boston	Surgery
3d	Mary Imogene Bassett, Cooperstown, N.Y.	Medicine
·	University Hospital, Cleveland, Ohio	Surgery
Porvaznik, John T., Jr.	Massachusetts General, Boston	Surgery
Rabinowitz, Sey-	Strong Memorial, Rochester, N.Y.	*Rotating
Randall, G. Hub-	U.S. Naval Hospital, Philadelphia,	
bard Ricketts, Howard J.	Pa. Grace-New Haven Community,	Rotating
	New Haven, Conn.	Surgery
E.	Univ. of Illinois Research and Educational, Chicago, Ill.	Rotating
Robinson, Stephen H.	Boston City (Harvard Service), Boston	Medicine
Rogers, Adrianne E.	Beth Israel, Boston	Medicine
Root, Allen W.		
	Strong Memorial, Rochester, N.Y.	
Rosson, Roberts S.		Medicine
Satin, David G.	North Carolina Memorial, Chapel Hill, N.C.	Mixed
Schur, Peter H. Shambaugh, Philip	Bronx Municipal, Bronx, N.Y.	Medicine
W.	Peter Bent Brigham, Boston	Pathology
Shavelson, Robert W.	Hospital of the U. of Penn., Philadelphia, Pa.	Rotating
Smith, Benjamin V., Jr.	Grace-New Haven Community, New Haven, Conn.	Surgery
Soffer, Richard L.	Beth Israel, Boston	Medicine
Solomon, Irene L.	University Hospitals, Columbus,	Medicine
	Ohio	Medicine
Solow, Charles	Mary Imogene Bassett, Cooperstown, N.Y.	Rotating

<sup>\*</sup> Two-year appointment.

Name	Hospital (and location)	Service
Sonnenblick, Ed-		
mund H.	Presbyterian, New York City	
Sorokin, Sergei P.	Harvard Medical School, Boston	Pathology
Sproul, Lyman E.	Boston City (Harvard Service), Boston	Medicine
Stanley, John A.	Univ. of California, San Francisco, Calif.	Rotating
Starke, Rodman D.	Massachusetts General, Boston	Medicine
Sullivan, William H.	Strong Memorial, Rochester, N.Y.	Surgery.
	Strong Memorial, Rochester, N.Y.*	•
	Boston City (Harvard Service), Boston	Medicine
Todd, Joseph C.	Cincinnati General, Cincinnati, Ohio	Rotating
Tollackson, Ken-		_
neth A.	U. of Oregon, Portland, Ore.	Rotating
Trucker, Earl B.	Univ. of Minnesota, Minneapolis, Minn.	Surgery
Tulenko, John F.	New York Hospital, New York City	Surgery
Ullian, Robert B.	Barnes, St. Louis, Mo.	Medicine
Unger, Laurence N.	Grace-New Haven Community, New Haven, Conn.	Surgery
Valeri, Charles R.	Boston City (Tufts Service), Bos-	ourgery
	ton	Medicine
von Hoyningen- Huene, C.B.	Univ. Hospital, Ann Arbor, Mich.	Rotating
von Kessler, Kirby,	Roosevelt Hospital, New York	M: J
L.C. Wangensteen, Ste-	City	Mixed
phen L.	Presbyterian, New York City	Surgery
	Hospital of the U. of Penn., Phila-	D
R. White, R. Christo-	delphia, Penn.	Rotating
pher A. W.	Presbyterian, New York City	Surgery

<sup>\*</sup> Two-year appointment.

Name	Hospital (and location)	Service
Wiggin, James W., Ir.	University Hospitals, Cleveland, Ohio	Surgery
•	U. of California, San Francisco, Calif.	Medicine
Winter, Thorne S.,		
3d Wolfson, Sanford	Peter Bent Brigham, Boston U. of Minnesota, Minneapolis,	Medicine
W/all II	Minn.	Surgery
Wollman, Harry	Univ. of Chicago Clinics, Chicago, Ill.	Rotating
Zimmon, David S.	Bellevue (II DivCornell), New York City	Medicine

# FOURTH CLASS (1959)

\*Aarestad, Norman Oliver, A.B. (Concordia Coll.) 1955, S.B. (Univ. of North Dakota) 1957. [Univ. of North Dakota School of Medi-Bigfork, Mont. Abroms, Gene Mayer, A.B. 1955. Dermott, Ark. Adelstein, Robert Simon, A.B. (Princeton Univ.) 1955. New York, N. Y. Amarasingham, Chandra-Raj, s.B. (Univ. of Kentucky) 1953. Jaffna, Ceylon 'Angelakos, Evangelos Theodorou, Diploma (Tripolis Coll.) 1948, A.M. (Boston University.) 1953, PH.D. (ibid.) 1956. [Athens Univ. Medical School. Tripolis, Greece Ault, Lynn Lyell, A.B. (Wabash Coll.) 1955. Lima, Ohio \*Austin, Raymond Francis, Jr., A.B. (Dartmouth Coll.) 1956. [Dartmouth Medical School]. Malden Baker, Frederick Sherman, A.B. 1955. Hastings-on-Hudson, N. Y. Barrett, James Elmer, Jr., A.B. 1955. Ashby Barten, Harvey Harold, A.B. 1955. East Orange, N. J. Beck, Kathryn Shaeffer, A.B. (Radcliffe Coll.) 1955. Cleveland, Ohio Beiles, Carl Myron, A.B. 1955. Woodmere, N. Y. Berard, Costan William, A.B. (Princeton Univ.) 1955. Cranford, N. J. Berger, Jacob Everett, A.B. 1955. Brookline Berlin, Richard Davidson, A.B. 1954. Santa Barbara, Calif. Blacklow, Robert Stanley, A.B. 1955. Belmont \*Bloom, Henry Samuel, A.B. (Dartmouth Coll.) 1956. [Dartmouth Brooklyn, N. Y. Medical School. Boden, Richard Evan, A.B. 1955. Cleveland Heights, Ohio Bostic, William Chivous, 3d, A.B. (Univ. of North Carolina) 1952. Forest City, N. C. Brown, Forest Elliott, s.B. (Univ. of Notre Dame) 1955. Louisville, Ky. Burden, Charles Earle, s.B. (Yale Univ.) 1955. Bath, Maine Burkhardt, Boyd Roberts (Univ. of Chicago, Columbia Univ., Stanford Univ.) Tipton, Ind.

\* Transferred to third year class.

Cage, Gary Walker, A.B. 1955.

° Transferred to the second year class.

Carey, Robert Willard, A.B. (Williams Coll.) 1955.

Birmingham, Ala.

Harrisburg, Pa.

<sup>‡</sup> Admitted on basis of three years' college work.

Carey, Thomas Alan, A.B. 1955.  *Corton Harry Woodson an (Millson Coll.) you	Denver, Colo.
*Carter, Harry Woodson, s.B. (Millsaps Coll.) 199 nessee Medical School].	ew Tazewell, Tenn.
*Chang, Frederic Chungwa, A.B. (Dartmouth Coll.)	
Medical School].	Memphis, Tenn.
Chirman, Savelly Samuel Boris, s.B. (State Teache	
A.M. (Univ. of Oregon) 1952.	Hillsboro, Ore.
Clemens, Norman Andrew, A.B. (Wesleyan Univ.	
Colham James Edward and (Williams Coll)	Wilkes-Barre, Pa.
Convey Richard Ellis A. R. (Williams Coll.) 1955	
Convay, Richard Ellis, A.B. 1952.	Salem Plattshura N. V.
Cooper, Alan James, A.B. (Williams Coll.) 1955. Cumberbatch, Rudolph St. Clair, s.B. (Columbia L	Plattsburg, N. Y.
Cumberbaten, Rudorph St. Clair, S.B. (Common C	Barbados, B.W.I.
Darrell, Richard Wheeler, A.B. 1955.	New York, N. Y.
De la Cruz, Oscar Alexander, B.SC. PHARMACY (U)	
	an Jose, Costa Rica
*Dillon, Donald Edward, A.B. (Dartmouth Coll.)	
Medical School].	Manchester, N. H.
Dixon, James Kelley, 2d, s.B. (Univ. of Alabama)	1955.
	Talladega, Ala.
Dowling, John Alan, A.B. 1955.	Holyoke
Downes, Hall, A.B. 1955.	Bogota, Colombia
Engelman, Karl, s.B. (Rutgers Univ.) 1955.	Toms River, N. J.
Epstein, Charles Joseph, A.B. 1955.	Philadelphia, Pa.
Epstein, Lois Barth, A.B. (Radcliffe Coll.) 1955.	Brookline
Esselstyn, Sarah Vosburgh, A.B. (Vassar Coll.) 1954	
Eyring, Edward Joseph, A.B. (Princeton Univ.) 195	Forest Hills, N. Y.
Fern, Donald Joel, A.B. 1955.  *Finkel, Gerald Charles, A.B. (Dartmouth Coll.)	
Medical School].	Newark, N. J.
Flacke, Joan Wareham, A.B. (Scripps Coll.) 1953.	Iowa City, Iowa
*Flagg, Richard Sexton, A.B. (Dartmouth Coll.)	1955. [Dartmouth
Medical School].	West Chester, Pa.
*Friedman, Alan Jay, A.B. (Dartmouth Coll.) 1956.	
cal School].	Brooklyn, N. Y.
*Friedman, Paul, A.B. (Univ. of Pennsylvania) 1955	. [Jefferson Medi-
cal College].	Philadelphia, Pa.
Galler, Floyd Bruce, A.B. 1955.	Chicago, Ill.
Galt John AR (Princeton Units) 1054	Pittefield

\*Gilsdorf, Walter Thomas, A.B. (*Univ. of North Dakota*) 1956, s.B. (*ibid.*) 1957. [Univ. of North Dakota School of Medicine].

Valley City, N. Dak.

Glaser, Frederick Bernard, s.B. (Univ. of Wisconsin) 1955.

Rochester, N. Y.

Gold, Warren Maxwell, A.B. 1955.

Wilmington, Del.

Goldstone, Robert Allen, s.B. (Univ. of Wisconsin) 1955.

New York, N. Y.

\*Gonnella, Joseph Salvator, A.B. (Dartmouth Coll.) 1956. [Dartmouth Medical School].

\*Mountainside, N. J.

Goss, Donald Arthur, A.B. (Hamilton Coll.) 1955.

Albuquerque, N. Mex.

\*Green, Howard Houg, A.B. (Dartmouth Coll.) 1956. [Dartmouth Medical School]. Birmingham, Mich.

\*Hansen, Wilhelm Gustav, A.B. (Dartmouth Coll.) 1956. [Dartmouth Medical School]. Babylon, N. Y.

Hardison, William Gerry Morgan, A.B. 1955. Washington, D. C. Hayes, Robert Earl, 3d, s.B. (Davidson Coll.) 1955. Fayetteville, N. C.

Haywood, Anne Mowbray, A.B. (Bryn Mawr Coll.) 1955.

New York, N.Y.

Herbst, Arthur Lee, A.B. 1953.

Pittsburgh, Pa.

\*Herrmann, Kenneth Louis, A.B. (Dartmouth Coll.) 1956. [Dartmouth Medical School]. Cincinnati, Ohio

Hobson, John Allan, A.B. (Wesleyan Univ.) 1955.

West Hartford, Conn.

Howard, Jed Lee, A.B. (Johns Hopkins Univ.) 1954.

Old Westbury, N.Y.

Jeanes, Lincoln Douglas, Jr., A.B. (Univ. of Texas) 1952. Dallas, Texas 

<sup>o</sup>Jeanrenaud, Arlette, B.A. (Univ. of Neuchatel) 1953. [Univ. of Geneva, School of Medicine]. Neuchatel, Switzerland

\*Kieger, Arthur Bill, A.B. (Dartmouth Coll.) 1956. [Dartmouth Medical School]. Cleveland, Ohio

\*Klein, David Emmett, A.B. (Dartmouth Coll.) 1956. [Dartmouth Medical School]. Helena, Mont.

\*Kopald, Hugh Humphreys, s.B. (*Univ. of Tennessee*) 1956. [Univ. of Tennessee Medical School]. *Memphis, Tenn.* 

Kris, Anton Oscar, A.B. (Yale Univ.) 1955. Stamford, Conn.

\*Kuhns, Thomas Robert, A.B. (Dartmouth Coll.) 1956. [Dartmouth Medical School]. Rochester, N. Y.

Lamb, Thomas Wade, A.B. (Yale Univ.) 1955. Grosse Pointe, Mich. Lampert, Nelson Robert, A.B. 1954. Minot, N. Dak. Leape, Lucian Leroy, Jr., A.B. (Cornell Univ.) 1952. Pittsburgh, Pa. Leeman, Cavin Philip, A.B. 1952. Nyack, N. Y. New York, N.Y. Lees, Robert Spencer, A.B. 1955. Lessow, Herbert, A.B. (Wesleyan Univ.) 1951. Hartford, Conn. Levey, Raphael Hertz, A.B. (Princeton Univ.) 1955. Princeton, N. J. Li, Ting-Kai, A.B. (Northwestern Univ.) 1955. Cuidad Trujillo, Dominican Republic Lindem, Martin Carl, Jr., A.B. (Amherst Coll.) 1955. Salt Lake City, Utah Lindenbaum, John, A.B. (Cornell Univ.) 1954 Harrison, N. Y. \*Litwin, Sonny Bert, s.B. (Univ. of Alabama) 1955. [Medical Coll. of Alabama7. Jasper, Ala. Livant, Judy, A.B. (Swarthmore Coll.) 1955. New York, N. Y. McCully, Kilmer Serjus, A.B. 1955. Alexandria, Va. McEwen, Charles Milton, Jr., A.B. 1954. Arlington McPeek, Jack Bucknam, A.B. 1955. Little Rock, Ark. Mahan, John Herman, A.B. 1953. Follansbee, W. Va. Maltsberger, John Terry, 3d, A.B. (Princeton Univ.) 1955. Cotulla, Texas Marinkovich, Vincent Anthony, s.B. (California Inst. of Technology) San Pedro, Calif. Marks, Ira, s.B. (Bethany Coll.) 1955. Brooklyn, N. Y. Merrifield, John Fenn, A.B. 1955. Wilmette, Ill. Messinger, Eli Charles, A.B. (Lafayette Coll.) 1955. Brooklyn, N. Y. Michelson, Ann Morris, A.B. (Smith Coll.) 1955. Brooklyn, N. Y. \*Moore, Daniel Houston, Jr., (Univ. of Mississippi). TUniv. of Mississippi Medical School]. Meridian, Miss. Moseley, Roger Victor, A.B. (Princeton Univ.) 1955. Urbana, Ill. Mundth, Eldred Dean, s.B. (Yale Univ.) 1955. Ianesville, Wis. Papanek, George Otto, A.B. (Swarthmore Coll.) 1953, A.M. (Harvard Univ.) 1955. New York, N. Y. Persky, Alan Donald, A.B. (Princeton Univ.) 1955. Jersey City, N. J. Pittman, Joseph Garretson, A.B. 1953. Orlando, Fla. Poutas, John David, A.B. 1955. Riverside, Conn. Prichard, James William, A.B. (Washington Univ.) 1955. Independence, Mo.

Rapoport, Stanley Isaac, A.B. (Princeton Univ.) 1954. Brooklyn, N.Y. \*Raskin, Neil Hugh, A.B. (Dartmouth Coll.) 1956. [Dartmouth Medical School]. Brooklyn, N.Y. Raymond, George David, s.B. (Univ. of Florida) 1955. Daytona Beach, Fla. Reed, William Patrick, A.B. 1955. Washington, D. C. \*Reuter, Seymour Harold, s.B. (Univ. of Connecticut) 1953, s.M. (Brown Univ.) 1955. [Northwestern Univ. Medical School]. Providence, R. I. Forest Hills, N. Y. Rivlin, Richard Saul, A.B. 1955. Roach, John Jared, s.B. (Allegheny Coll.) 1955. Medina, N. Y. Robbins, Norman, A.B. (Columbia Univ.) 1955. Forest Hills, N. Y. Rodgers, John Barclay, Jr., A.B. (Denison Univ.) 1955. Chagrin Falls, Ohio \*Rosenberg, Irwin Harold, s.B. (Univ. of Wisconsin) 1956. [Univ. of Madison, Wis. Wisconsin Medical School]. Rosenthal, Jerome, A.B. (Columbia Univ.) 1955. Brooklyn, N. Y. Rowe, Kenneth Wyer, Jr., A.B. (Carleton Coll.) 1955. Glen Ellyn, Ill. \*Ruel, Richard Edward, A.B. (Dartmouth Coll.) 1956. [Dartmouth Medical School]. Lebanon, N. H. Rush, David, A.B. 1955. Jamaica, N. Y. Ryan, James Warren, A.B. (Montana State Univ.) 1955. Anchorage, Alaska \*Ryan, Kevin Gude, A.B. (Dartmouth Coll.) 1956. [Dartmouth Medi-Saddle River, N. J. cal School]. Sanderson, Richard George, A.B. (Wesleyan Univ.) 1955. Abington Sapir, Paul Edward, A.B. 1950, A.M. 1952. Gilmanton I. W., N. H. Schildkraut, Joseph Jacob, A.B. 1955. Brooklyn, N. Y. Schneider, Peter Bernard, A.B. 1955. Brooklyn, N. Y. \*Schoenbrun, Richard Lee, A.B. (Pomona Coll.) 1955. [Univ. of South-Los Angeles, Calif. ern California School of Medicine]. Shepherd, Gordon Murray, s.B. (Iowa State Coll.) 1955. Ames, Iowa Sidd, James Jenson, A.B. 1955. Brighton Soltys, John Joseph, Jr., s.B. (Univ. of Massachusetts) 1953. Holyoke Spaeth, George Link, A.B. (Yale Univ.) 1954. Philadelphia, Pa. Spangler, Robert Alan, A.B. 1955. Celina, Ohio Kew Gardens, N. Y. ‡Spencer, Roger Felix (Yale Coll.) Spievack, Alan Robert, A.B. (Kenyon Coll.) 1955. Cincinnati, Ohio

Steinhauer, Bruce William, A.B. (Amherst Coll.) 1955. Toledo, Ohio \*Suritis, Zigurds Leo, A.B. (Dartmouth Coll.) 1956. [Dartmouth Medical School]. Wassaic, N.Y. Taube, Irvin, s.B. (Tufts Coll.) 1955. Portsmouth, N. H. Taylor, Leland Harris Graham, A.B. (Stanford Univ.) 1955. Oakland, Calif. \*Teal, Peter Valentine, A.B. (Dartmouth Coll.) 1955. [Dartmouth Medical School 7. Omaha, Neb. Thron, Christopher Dennis, A.B. (Dartmouth Coll.) 1953, A.M. (ibid.) Paterson, N. J. Urquhart, John, 3d, A.B. (The Rice Institute) 1955. Dallas, Texas Vaillant, George Eman, A.B. 1955. Bloomfield Hills, Mich. Vesell, Elliot Saul, A.B. 1955. New York, N. Y. \*Weglarz, Stanley Stephen, A.B. (Dartmouth Coll.) 1956. [Dartmouth Medical School]. West Franklin, N. H. Wegner, Karl Heinrich, A.B. (Yale Univ.) 1952. Pierre, S. Dak. Welland, Frederick Hurd, A.B. (Princeton Univ.) 1955. Evanston, Ill. Williams, Harold Warren, Jr., s.B. (Massachusetts Inst. of Technology) Hyannis \*Wohl, Richard Hilburn, A.B. 1955. [Vanderbilt Univ. School of Medicine]. Birmingham, Ala. Zollinger, Robert Milton, Jr., A.B. 1955. Columbus, Ohio Zwilling, William Frederick, A.B. 1955. New York, N.Y.

# THIRD CLASS (1960)

Alpers, David Hershel, A.B. 1956.

Axelrod, David, A.B. 1956.

Azadian, Harry Yeghishe, s.B. (Tufts Univ.) 1956.

\*Bach, Fritz Heinz, A.B. 1955. [Washington Univ. School of Medicine].

Burlington, Vt.

Bank, Arthur, A.B. (Columbia Coll.) 1956.

Middle Village, N. Y.

Barr, Joseph Seaton, Jr., A.B. (Princeton Univ.) 1956.

Newton Centre

Barrett, John Smith, A.B. (Haverford Coll.) 1956.

Pottsville, Pa.

‡ Admitted on basis of three years' college work.

§ Admitted on basis of four years' college work (in several cases work for the degree completed).

Transferred to the second year class.
Transferred to the third year class.

Barrett, Peter Van Doren, A.B. (Univ. of California at Los Angeles)

1956.	Montrose, Calif.
Barrie, Joseph Rollin, s.B. (Yale Univ.) 1956.	Forest Hills, N.Y.
Baughman, Richard DeWeese, A.B. (Amherst Coll	
, , ,	Wellesley Hills
Berne, Joel Edward, A.B. (Bard Coll.) 1956.	Brooklyn, N. Y.
Bernier, George Matthew, Jr., A.B. (Boston Coll	
	Newton Centre
Biehl, Robert Frank, s.B. (Massachusetts Inst. of	
	Red Bluff, Calif.
Binder, Sheldon Carl, A.B. 1956.	Boston
Birnbaum, Naomi Helen, A.B. (Univ. of Chicag	
1956.	Brooklyn, N. Y.
*Britton, Melvin Creed, Jr., A.B. (Dartmouth Col.	
	wood Springs, Colo.
Buchanan, John Lawrence, A.B. (Dartmouth Coll.	
Oxford) 1956.	Wray, Colo.
Budd, Matthew Alan, A.B. (Amherst Coll.) 1956.	Newton
Bulger, Roger James, A.B. 1955	Hollis, N. Y.
§Bull, John Carraway, Jr. (U.S. Naval Academy,	•
<u>g_ a, y =                           </u>	Alexandria, Va.
Burrington, John Darwin, A.B. 1953 (1952), S.M. (	
1953.	Williamsburg, Va.
Burtis, Richard Thomas, A.B. (Swarthmore Coll.	<u> </u>
Oxford) 1957.	Wallingford, Pa.
Chacko, John Chirakaikaran, s.B. (Univ. of Red	9,
, , , ,	Delhi, India
Chaffey, Ben Taft, A.B. (Stanford Univ.) 1953.	Carmel, Calif.
Chasin, Richard Melvin, A.B. (Yale Univ.) 1956.	Brooklyn, N. Y.
*Cloutier, Mark David, A.B. (Dartmouth Coll.)	) 1957. [Dartmouth
Medical School].	Auburn, Me.
Cohen, Jordan Jay, A.B. (Yale Univ.) 1956.	Kansas City, Mo.
Cohen, Stephen Norris, s.B. (Massachusetts Inst. o	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	Tuckahoe, N. Y.
Colman, Robert Wolf, A.B. 1956.	Neponsit, N. Y.
Cox, James Floyd Wright, A.B. (Swarthmore Co	oll.) 1952. Philadelphia, Pa.
Davis, Solon Edward, 3d, A.B. (Vanderbilt Univ	•
, , , , , , , , , , , , , , , , , , , ,	Nashville, Tenn.

Dobrow, Robert Jay, A.B. (Columbia Coll.) 1956. New York, N. Y. Donovan, John Arnold, Jr., A.B. (Williams Coll.) 1956. Rochester, N. Y. Eaton, John Monroe, A.B. (Stanford Univ.) 1956. **Brookline** Ellis, Charles Archibald, Jr., A.B. (Coll. of the Holy Cross) 1956. Rochester, N.Y. Fishman, Lawrence Martin, A.B. 1955. Brooklyn, N. Y. \*Forcier, Robert Jackson, A.B. (Dartmouth Coll.) 1957. [Dartmouth Jaffrey, N H. Medical School. Frank, Michael M, A.B. (Univ. of Wisconsin) 1956. Brooklyn, N. Y. \*Frech, Robert Spalding, A.B. (Dartmouth Coll.) 1952. [Dartmouth Medical School. Moorestown, N. J. Frey, Walter Willis, A.B. (Transylvania Coll.) 1956. Lexington, Ky. Friedberg, Richard Michael, A.B. 1956. New York, N.Y. \*Gallagher, William Francis, Jr., A.B. (Dartmouth Coll.) 1957. [Dartmouth Medical School]. Longmeadow Gelch, Melvyn M, A.B. (Johns Hopkins Univ.) 1956. Brooklyn, N. Y. Gittes, Ruben Foster, A.B. 1956. Melrose Goldstein, David Arthur, A.B. 1956. Iamaica Estates, N.Y. Green, William Thomas, Jr., A.B. 1956. Belmont Greer, Robert Bruce, 3d., A.B. (Haverford Coll.) 1956. Renfrew, Pa. Halverstadt, Donald Bruce, A.B. (Princeton Univ.) 1956. Cleveland Heights, Ohio Hansen, Thomas Wilcox, A.B. (Univ. of Chicago) 1956. Hammond, Ind. \*Hare, Hugh Gerald, s.B. (Massachusetts Inst. of Technology) 1955. [Univ. of Utah College of Medicine]. Pasadena, Cal. Hechtman, Herbert Ben, A.B. (Princeton Univ.) 1956. Brooklyn, N. Y. Hoffman, Allan Augustus, A.B. (Princeton Univ.) 1956. Glen Rock, N. J. Holden, Robert Adams, s.B. (Massachusetts Inst. of Technology) Eastondale 1956. Holm, James Lorimer, A.B. (Augustana Coll.) 1956. Moline, Ill. Houle, Roland Eugene, A.B. (Coll. of the Holy Cross) 1956. Detroit, Mich. Seattle, Wash. Hughes, James Raymond, A.B. (Stanford Univ.) 1953. Hull, Franklin Eugene, A.B. (Wooster Coll.) 1956. Canfield, Ohio

Iavazzo, Ronald Eugene Stephan, A.B. 1956.

James, Douglas Harold, A.B. (Denison Univ.) 1956.

Providence, R. I.

Toledo, Ohio

°Jamison, Rex Lindsay, A.B. (State Univ. of Iowa) 1955, B.A. (Univ. of
Oxford) 1957. [State Univ. of Iowa Coll. of Medicine].
Story City, Iowa
Jeffery, Russell Lee, s.B. (Boston Coll.) 1956. Malden
*Jensen, Eric Hougaard, A.B. (Dartmouth Coll.) 1956. [Dartmouth
Medical School]. Mt. Gretna, Pa.
*Kamper, David Gary, A.B. (Dartmouth Coll.) 1957. [Dartmouth
Medical School]. Milwaukee, Wis.
Kaplan, Marshall Myles, s.B. (Yale Univ.) 1956. Winthrop
Kastin, Abba Jeremiah, A.B. 1956. Cleveland Heights, Ohio
Kingsbury, Richard Alan, s.B. (Tufts Coll.) 1956. Taunton
Kleiger, Robert Edward, A.B. (Yale Univ.) 1956. Brooklyn, N.Y.
Korn, David A.B. 1954 Providence, R. I.
Kurland, Morton David, A.B. (Yale Univ.) 1956. Brooklyn, N. Y.
LaMonte, Charles Southwick, A.B. 1956. Columbus, Obio
*Larson, Alvin Leroy, A.B. (Concordia Coll.) 1955, s.B. in Medicine
(Univ. of North Dakota) 1958, s.m. (ibid.) 1958. [Univ. of North
Dakota School of Medicine]. Great Falls, Mont.
Lawall, Martha Elizabeth, A.B. (Oberlin Coll.) 1956. Cincinnati, Ohio
Leder, Philip, A.B. 1956. Arlington, Va.
Levin, Albert Bernard, A.B. 1956. East Orange, N. J.
*Lindseth, Richard Emil, A.B. (Dartmouth Coll.) 1957. [Dartmouth
Medical School]. Denver, Colo.
Luhrs, Caro Elise, A.B. (Swarthmore Coll.) 1956. South Orange, N. J.
*McCarthy, Laurence James, A.B. (Yale Univ.) 1956. [Georgetown
Univ. School of Medicine]. Watertown
McClintock, Richard Polson, Jr., A.B. (Dartmouth Coll.) 1956.
Medford
Martin, Robert Gene, A.B. 1956.  Los Angeles, Calif.
*Morrison, Robert William, A.B. 1956. [Univ. of Virginia School of
Medicine]. Northampton
*Mulder, George Arnold, A.B. (Dartmouth Coll.) 1957. [Dartmouth
Medical School]. Montclair, N. J.
Murphy, Paul John, A.B. 1955. Roslindale
Myler, Richard Karl, A.B. (Yale Univ.) 1956. Longmeadow
*Neff, John Michael, A.B. (Pomona Coll.) 1955. [Univ. of California at
Los Angeles School of Medicine]. Claremont, Cal.
Neistadt, Arnold, A.B. 1956. Newton Centre

‡Nesburn, Anthony Bart A.B. (Univ. of California 1958.	a at Los Angeles) everly Hills, Calif.
*Nesburn, Brigid Penelope Gray, A.B. (Univ. of Ca.	•
geles) 1955. [Univ. of California at Los Angele	
cine].	Los Angeles, Cal.
Norden, Carl William, A.B. (Columbia Univ.) 1956.	
Ottinger, Leslie Wayne, A.B. (Rice Inst.) 1953.	Kerrville, Tex.
Perkins, John Calvin, A.B. 1956.	Hampton, N. H.
Perlroth, Mark Guido (Univ. of Rochester).	New York, N. Y.
	Dartmouth Medical
	Forest Hills, N. Y.
-	
*Plott, Dwight Morgan, A.B. (Johns Hopkins Uni	
Coll. of Alabama].	Rogersville, Ala.
Polk, Hiram Carey, Jr., s.B. (Millsaps Coll.) 1956.	Jackson, Miss.
Pollen, Daniel Aaron, A.B. 1956.	Fall River
Powers, James Alan, A.B. 1956.	Evansville, Ind.
Radin, Eric Leon, A.B. (Amherst Coll.) 1956.	Brooklyn, N. Y.
*Raslavicius, Polius Aleksandras, A.B. (Dartmouth)	
mouth Medical School].	Chicago, Ill.
‡Replogle, Robert Lee (Cornell Coll.).	Clear Lake, Iowa
Reynolds, Stephen Leighton, A.B. 1955.	Weston
*Rickles, William Hobert, Jr., s.B. (Southern Meth	
s.m. (Baylor Univ.) 1958. [Baylor Univ. Coll.	•
	Marshall, Texas
Rogers, Richard Crosby, A.B. 1956.	Orinda, Calif.
*Roth, Lawrence Max, A.B. (Vanderbilt Univ.) 1957	. [Vanderbilt Univ.
School of Medicine].	Oak Ridge, Tenn.
Ruef, John Smith, A.B. (Cornell Univ.) 1953. L	ake George, N. Y.
Russell, Warren Milo, s.B. (Univ. of Washington) 19	956. Nampa, Idaho
Sack, Lawrence Carleton, A.B. 1956.	Worcester
Salzer, John Mo, s.B. (Univ. of Wisconsin) 1956.	Cincinnati, Ohio
Sanger, Sirgay, A.B. 1956.	Brooklyn, N. Y.
*Saphir, James Robin, A.B. (Dartmouth Coll.) 1957.	
-	Highland Park, Ill.
_	Wellington, Ohio
Schaller, Robert Thomas, Jr., A.B. (Yale Univ.) 19	9
*Schoop, Helmar Dietrich (Freiherr-vom-Stein	_
Wolfgang-Goethe Univ.]. [Univ. of Vienna]	
	furt-am-Main, Ger.
2 1 41000)	

Schwartz, Gordon Francis, A.B. (Princeton Univ.)	1056.
	Plainfield, N. J.
Segel, David Peter, A.B. 1956.	Newton
	Manchester, N. H.
*Shirley, Robert Lawrence, A.B. (Dartmouth Coll.)	
Medical School].	Waban
Shohet, Stephen Byron, A.B. 1956.	Brookline
Sigler, Stephen Jay, A.B. 1955.	Brooklyn, N. Y.
Silverman, Carl George, A.B. (Williams Coll.) 1956.	• •
*Smith, Raphael Ford, 3d, A.B. (Vanderbilt Univ.)	
Univ. School of Medicine].	Owensboro, Ky.
Stason, William Boaz, s.B. (Univ. of Michigan) 19	
, , , , , , , , , , , , , , , , , , , ,	Ann Arbor, Mich.
Steigbigel, Neal Hiram, A.B. (Princeton Univ.) 1956	
Stenberg, Clayton Carroll, s.B. (Univ. of New Ha	
( · · · · · · · · · · · · · · · · · · ·	Berlin, N. H.
*Tankersley, James Constant, A.B. (Dartmouth Co	· ·
mouth Medical School].	South Bend, Ind.
*Tannenbaum, Maurice, A.B. (Dartmouth Coll.)	
Medical School].	Bronx, N. Y.
Tauraso, Nicola Michael, s.B. (Boston Coll.) 1956.	Salem
Tevis, Duane Kinne, s.B. (Univ. of Arizona) 1956.	
Thorne, Melvyn Charles, A.B. (Univ. of California)	
	n Francisco, Calif.
Thornton, Richard Rollin, A.B. (State Univ. of lowa)	) 1955.
	ouncil Bluffs, Iowa
*Tingelstad, Jon Bunde, A.B. (Univ. of North Dakota	a) 1957, s.B. (ibid.)
. 1958. [Univ. of North Dakota School of Medicin	ne].
	McVille, N. Dak.
*Trusler, Harold Marshall, A.B. (Dartmouth Coll.)	1957. [Dartmouth
Medical School].	Indianapolis, Ind.
Valentine, Fred Townsend, A.B. 1956.	Detroit, Mich.
Veit, Diana Jane, A.B. (Cornell Univ.) 1955.	Brookline
*Vogel, Robert Mannes, A.B. (Dartmouth Coll.)	1957. [Dartmouth
Medical School].	New York, N. Y.
Ward, Gene Arlan, s.B. (Tufts Coll.) 1956.	Orange
*Watt, Thomas Lorne, A.B. (Dartmouth Coll.)	1957. [Dartmouth
Medical School].	Phoenix, Ariz.

Watts, Hugh Godfrey, A.B. (Princeton Univ.) 1956.

Prince Rupert, B.C., Canada

Weltner, John Sigmund, A.B. 1956.

Stanford, Conn.

Wirtschafter, Jonathan Dine, A.B. (Reed Coll.) 1956. Portland, Ore. Woodruff, Robert Arnold, Jr., A.B. 1956. Rochester, Mich. Wurtman, Richard Jay, A.B. (Univ. of Pennsylvania) 1956.

Philadelphia, Pa.

\*Zaslow, Stephen Lee, A.B. (Dartmouth Coll.) 1957. [Dartmouth Medical School].

Brooklyn, N. Y.

## SECOND CLASS (1961)

‡Albright, Tenley Emma (Radcliffe Coll.). Newton Centre Almond, Douglas Vincent, A.B. (Yale Univ.) 1957. Tulsa, Okla. Alterman, Morton Arnold, A.B. (Johns Hopkins Univ.) 1957.

Passaic, N. J.

Appleton, William George, Jr., A.B. 1954. Belleville, Ill. Avantaggio, Frank Oliver, Jr., A.B. (Wesleyan Univ.) 1956.

Waldoboro, Maine

Backman, John Herbert, s.B. (Franklin & Marshall Coll.) 1957.

Jerome, Pa.

Benson, Herbert, A.B. (Wesleyan Univ.) 1957. Yonkers, N. Y. Berg, Howard Curtis, s.B. (California Inst. of Technology) 1956.

Iowa City, Iowa

Bibler, Darrel Dwight, Jr., s.B. (Denison Univ.) 1957. Bucyrus, Ohio Bigelow, Llewellyn Barry, A.B. 1957. Lincoln Bishop, John Michael, A.B. (Gettysburg Coll.) 1957. Gettysburg, Pa.

Carpenter, Howard Francis, Jr., A.B. (Coll. of the Holy Cross) 1957.

Providence, R. I.

Cline, Allen Lee, s.B. (Baldwin-Wallace Coll.) 1957. Celina, Ohio Cohen, Norman Robert, A.B. (Cornell Univ.) 1957. Schenectady, N.Y. Connell, Michael Lee, A.B. (Stanford Univ.) 1957. Dallas, Texas Covey, Thomas Harvey, Jr., A.B. (West Virginia Univ.) 1957.

Weston, W. Va.

Davidson, Mayer Benson, A.B. (Swarthmore Coll.) 1957. Baltimore, Md. DeLong, George Robert, A.B. (DePauw Univ.) 1957. Lafayette, Ind. DiCero, Eugene, A.B. (Johns Hopkins Univ.) 1957, A.M. (ibid.) 1957.

Staten Island, N.Y.

<sup>‡</sup> Admitted on basis of three years' college work.

Dohan, Francis Curtis, Jr., A.B. (Princeton Univ.) 1957. Bala-Cynwyd, Pa. Dow, John Patterson, A.B. (Bowdoin Coll.) 1957. Dover-Foxcroft, Maine Dowling, John Elliott, A.B. 1957. Providence, R. I. Edelstein, Stephen George, A.B. (New York Univ) 1957. Brooklyn, N. Y. Eggleston, Robert Bolling, A.B. (Univ. of Virginia) 1957. Danville, Va. Ellis, Jack Thomas, A.B. 1952. Waterloo, Iowa Ellis, William Wallace, A.B. (Yale Univ.) 1957. Memphis, Tenn. Fearon, Richard Eubanks, A.B. (Williams Coll.) 1957. Brooklyn, N. Y. Fischer, James Joseph, s.B. (Yale Univ.) 1957. Hazleton, Pa. Fischer, Josef E, A.B. (Yeshiva Coll.) 1957. Brooklyn, N.Y. Flescher, Robert, A.B. (Columbia Univ.) 1957. Brooklyn, N.Y. Fraley, Elwin Eugene, A.B. (Princeton Univ.) 1957. Athens, Pa. Frederick, Albert Roland, Jr., s.B. (Univ. of Florida) 1957. St. Petersburg, Fla. Chevy Chase, Md. Gardner, Pierce, A.B. (Amherst Coll.) 1957. Grayer, Stephen Poss, A.B. (Amberst Coll.) 1957. Brooklyn, N. Y. Grimm, Arthur Ronald, A.B. 1957. Port Washington, N.Y. Guthrie, Randolph Hobson, Jr., A.B. (Princeton Univ.) 1957. Mountain Lakes, N. J. ‡Hakala, Thomas Richard (Stanford Univ.) Aberdeen, Wash. Hanschka, Mark Richard, A.B. (Amherst Coll.) 1955. Montclair, N. J. Harpel, Peter Cahners, A.B. 1957. Bangor, Maine Babylon, N.Y. Henneke, Hope, A.B. (Vassar Coll.) 1957. Himmelhoch, Samuel Ralph, A.B. 1957. Detroit, Mich. Hoffer, Axel, A.B. 1957. Providence, R. I. ‡Holmes, James Thoburn, Jr. (Southwestern at Memphis) McKenzie, Tenn. Hurd, James Ronald, A.B. (Princeton Univ.) 1957. Belleville, Ill. Hyslop, Newton Everett, Jr., A.B. 1957. Boston Johnston, Kent Harry, s.B. (Ohio State Univ.) 1957. Dresden, Ohio Kang, Andrew Ho, s.B. (Wofford Coll.) 1957. Seoul, Korea Keitt, Alan Seaver, A.B. 1957. Madison, Wis. Kramer, Jeffrey, A.B. 1957. New York, N. Y. Kriss, Frederick Charles, A.B. (Ohio State Univ.) 1957. El Paso, Texas Lamb, Richard Norton, B.E. (Yale Univ.) 1957. Monticello, Ark. Lane, John Michael, A.B. (Yale Univ.) 1957. Old Greenwich, Conn.

Lee, Glenn Yue-Hung, A.B. 1957. Portland, Oregon Leinbach, Robert Charles, A.B. (Williams Coll.) 1957. Wallingford, Conn. Levenson, Alan Ira, A.B. 1957. Brighton Lewis, David Carleton, A.B. (Brown Univ.) 1957. Newton Upper Falls Liebert, Peter Selig, A.B. (Princeton Univ.) 1957. Brooklyn, N.Y. Loeb, John Nichols, A.B. 1957. New York, N.Y. McGavic, John Dickinson, A.B. (Amherst Coll.) 1957. Bryn Mawr, Pa. Macht, Lee Brand, A.B. (Princeton Univ.) 1957. New York, N.Y. Maxwell, John Alan, A.B. 1955. Kansas City, Kans. Menninger, John Robert, A.B. 1957. Dayton, Ohio Mertz, James Joseph, A.B. (Rutgers Univ.) 1957. Dover, N. J. Mirabile, Elizabeth Ann, A.B. (Wellesley Coll.) 1957. Farmington, Conn. Moldawer, Muriel Eleanor, s.B. (Pennsylvania State Univ.) 1957. Elkins Park, Pa. Moser, Royce, Jr., A.B. 1957. Versailles, Mo. Nee, Yeu-Tsu, A.B. (Univ. of South Dakota) 1957. Pingtung, Formosa Nelson, Franklin Stirling, A.B. 1955. Tulsa, Okla. Niceforo, John Richard, s.B. (Tufts Univ.) 1957. Methuen Ockner, Robert Keith, A.B. (Pomona Coll.) 1957. Los Angeles, Calif. Olson, Lloyd Clarence, A.B. (Reed Coll.) 1957. Dayton, Oregon Otto, William John, Jr., A.B. 1957. Philadelphia, Pa. Pareja, Nilo John, s.B. (Tulane Univ.) 1957. Tampa, Fla. Parsons, Victor Hungerford, A.B. (Williams Coll.) 1957. Newton Centre ‡Poe, Richard Orla (Iowa State Coll.). Waterloo, lowa Polissar, Jan, s.B. (Univ. of California) 1956. San Francisco, Calif. Randolph, Peter Bulkley Fitz, A.B. (Yale Univ.) 1956. New York, N. Y. Elizabeth, N. J. Reibel, Stephen Paul, A.B. 1957. Rhine, Mark Woodforde, A.B. 1957. New York, N.Y. Rife, Donald Lee, A.B. (Yale Univ.) 1957. Fort Wayne, Ind. White Plains, N.Y. Robb, George Lorimer, A.B. 1957. Spokane, Wash. Robertson, Gary Lee, A.B. 1957. Rolde, Edward Jackson, A.B. 1957. Brookline Rose, Robert Marc, A.B. (Bard Coll.) 1957. New York, N.Y. Rotner, Howard Ezra, A.B. (Amberst Coll.) 1957. Yonkers, N.Y. Rubin, Martin Lewis, A.B. (Princeton Univ.) 1957. Gloversville, N.Y. Scherl, Donald Jacob, A.B. (Yale Univ.) 1957. New York, N.Y.

Schwartz, Arthur Harold, A.B. (Columbia Univ.) 1957.

New York, N.Y.

Seidl, Larry Gilbert, Jr., A.B. (Western Reserve Univ.) 1957.

Delaware, Ohio

Sheft, Douglas Joel, A.B. (Cornell Univ.) 1957. West Orange, N. J. Shein, Harvey Marsden, A.B. (Cornell Univ.) 1954. Providence, R. I.

Shine, Kenneth Irwin, A.B. 1957.

Silver Spring, Md.
Steckel, Richard Jay, A.B. 1957.

Los Angeles, Calif.

Stein, John Michael, A.B. 1957. Larchmont, N. Y.

Stephans, James Harry, A.B. (Carleton Coll.) 1957. Rushford, Minn. Strasburger, Larry Hollingsworth, A.B. (Yale Univ.) 1957. Metairie, La.

Stratton, John Perley, A.B. (Earlham Coll.) 1957. Montclair, N. J. Stryer, Lubert, s.B. (Univ. of Chicago) 1957. Forest Hills, N. Y.

Veech, Richard Lewis, A.B. 1957.

Decatur, Ill.

Vernon, James Kenneth, A.B. (Amherst Coll.) 1957. Medina, N.Y.

Warram, James Heber, Jr., s.B. (Univ. of Oklahoma) 1957.

Oklahoma City, Okla.

Weintraub, Ronald Martin, A.B. 1957. Brookline

Welpton, Douglas Felber, A.B. (Stanford University) 1957.

Los Angeles, Calif.

Wheeler, Paul Saurel, A.B. 1957. Chestnut Hill

Wheeler, Robert Clews, 2d, A.B. (Johns Hopkins Univ.) 1957.

Mundy Point, Va.

Wilber, John Franklin, A.B. (Amherst Coll.) 1957. Ossining, N. Y. Woody, Charles Dillon, A.B. (Princeton Univ.) 1957. Ridgewood, N. J. Young, Robert Rice, s.B. (Yale Univ.) 1956. Newell, Pa. Zawacki, Bruce Edwin, s.B. (Coll. of the Holy Cross) 1957. Taunton Zimmerman, Clarence Edgar, A.B. (Yale Univ.) 1957. Lancaster, Pa.

## FIRST CLASS (1962)

Abel, Howard Richard, A.B. (Cornell Univ.) 1958. New York, N.Y. Alexander, Robert, A.B. (Wesleyan Univ.) 1958. Hartford, Conn. August, Charles Saul, A.B. 1958. Northampton Baddock, Sheldon Stuart, A.B. (Amherst Coll.) 1958. Baltimore, Md. Barrett, Cynthia Townsend, A.B. (Vassar Coll.) 1958.

Santa Barbara, Cal.

Los Angeles, Cal.

Beasley, Robert Palmer, A.B. (Dartmouth Coll.) 1958.

Bennett, Michael Jay, A.B. (Princeton Univ.) 1958. Lynbrook, N. Y. Berlin, Cheston Milton, Jr., A.B. (Haverford Coll.) 1958. Pittsburgh, Pa. Shrub Oak, N. Y. Bernhard, Elizabeth, s.B. (Tufts Col.) 1958. Bernhardt, John Christian, Jr., s.B. (Davidson Coll.) 1958. Lenoir, N. C. Chelsea Berson, Eliot Lawrence, s.B. (Yale Univ.) 1958. Bridge, Martha Sylvia, A.B. (Bryn Mawr Coll.) 1958. New York, N. Y. Bulova, Stephen Ian, A.B. (Yale Univ.) 1958. Riverdale, N. Y. Burton, Richard Irving, A.B. (Amherst Coll.) 1958. Providence, R. I. Colman, Arthur David, A.B. 1958. Neponsit, N. Y. Conn, Richard Lee, A.B. (Thiel Coll.) 1958. Akron, Obio Denver, Colo. Cooksey, Jack Calvin, A.B. 1958. Cserr, Robert, A.B. 1958. Fords, N. J. Dain, David Wilson, A.B. (Hiram Coll.) 1958. Warren, Ohio Deane, Frederick Robinson M., A.B. (Amberst Coll.) 1958. East Grand Rapids, Mich. de Lemos, Robert Adolph, A.B. (Amberst Coll.) 1958. Mount Vernon, N. Y. Dewees, Guy Bryan, 3d, A.B. (Univ. of Mississippi) 1958. Pocabontas, Miss. Maplewood, N. J. Dixon, John Paul, A.B. (Yale Univ.) 1952. Dluhy, Robert George, A.B. (Princeton Univ.) 1958. Clifton, N. J. Dobrow, Richard Bein, A.B. 1958. Akron, Obio Donahue, William Cannon, s.B. (Coll. of the Holy Cross) 1958. Belmont Drummond, Charles Stitt, Jr., s.B. (Davidson Coll.) 1958. Winston-Salem,  $N.\ C.$ Du Pont, Robert Louis, Jr., A.B. (Emory Univ.) 1958. Decatur, Ga. Dvorak, Harold Fisher, A.B. (Princeton Univ.) 1958. Milwaukee, Wis. Evans, Peter Alan, A.B. 1958. Cresson, Pa. Feldman, Arnold, A.B. (Columbia Univ.) 1958. Brooklyn, N. Y. Finkel, Richard Mezer, A.B. 1958. Chelsea Franklin, Ernest Washington, 3d, A.B. (Princeton Univ.) 1958. Friedberg, David Zachary, A.B. (Williams Coll.) 1958. Brooklyn, N. Y.

Gill, Donald Joseph, s.B. (Boston Coll.) 1958. Everett Gold, Ronald, A.B. 1957. Chester, Pa. Goldberg, Morton Falk, A.B. 1958. Amesbury Goodsitt, Arnold Martin, A.B. (Yale Univ.) 1958. Shaker Heights, Ohio Green, Winslow Warren Chilton, A.B. 1958. Brookline Greenwell, Jack Brysson, Jr., A.B. (Yale Univ.) 1958. Kealakekua, H.I. Griffin, Mary Cynthia, A.B. (Radcliffe Coll.) 1958. Shaker Heights, Ohio Gudeman, Jon Edward, A.B. 1958. Winnetka, Ill. Gutierrez, Jaime Ramon, A.B. 1958. San Jose, C. R. Hanson, Graeme, A.B. (Yale Univ.) 1958. Bath, Maine Hartsuck, James Malcolm, s.B. (Univ. of Oklahoma) 1958. Drumright, Okla. Detroit, Mich. Hartz, John William, A.B. (Albion Coll.) 1958. ‡Herb, Robert William (Harvard Coll.) Mt. Carmel, Pa. Howe, Robert Bruce, s.B. (Union Coll.) 1958. Little Falls, N.Y. Hussey, Robert William, s.B. (Albright Coll.) 1958. West Reading, Pa. Inselburg, Joseph Willard, s.B. (Univ. of Miami) 1958. Miami, Fla. Jonas, Steven, A.B. (Columbia Univ.) 1958. New York, N.Y. Jorgensen, Charles Richard, s.B. (Iowa State Coll.) 1958. Elkhorn, Neb. Keusch, Gerald Tilden, A.B. (Columbia Univ.) 1958. New York, N.Y. Kim, Samuel Homer, A.B. 1958. Watertown Konigsberg, Stephen Feuer, A.B. (Columbia Univ.) 1958. New York, N. Y. Kosowsky, Bernard David, A.B. (Columbia Univ.) 1958. Bronx, N. Y. Kretsinger, Robert Harvey, A.B. (Univ. of Colorado) 1958. Pickstown, S. D. Lawrence, Thomas George, Jr., s.B. (Union Coll.) 1958. W. Hartford, Conn. Lees, Charles William, A.B. (Amberst Coll.) 1958. Chatham Lehman, Ralph Arnold Walter, A.B. 1958. New York, N.Y. Lehrich, James Richard, A.B. 1958. Brooklyn, N. Y. McIntosh, Kenneth, A.B. 1958. New York, N. Y. McPhedran, Peter, A.B. 1958. Philadelphia, Pa. Mack, Joel Donald, A.B. 1958. Brighton Mansfield, Peter Bicknell, A.B. (Stanford Univ.) 1958. Seattle, Wash.

Colver, Pa.

Martin, James MacLaren, s.B. (Juniata Coll.) 1957.

May, George Arthur, Jr., A.B. (Yale Univ.) 1958. Madison, Ind. Menken, Matthew, A.B. (Univ. of Pennsylvania) 1958. Philadelphia, Pa. Meyer, Roger Emil, A.B. (Hobart Coll.) 1958. West Nyack, N. Y. Mezey, Esteban, A.B. (Yale Univ.) 1958. Bogota, Col. Mickel, Hubert Sheldon, s.B. (Eastern Nazarene Coll.) 1958. Alum Bank, Pa. Miller, George, A.B. 1958. Chicago, Ill. Minock, Catherine Monnier, A.B. (Stanford Univ.) 1958. Tarzana, Cal. Moellering, Robert Charles, Jr., A.B. (Valparaiso Univ.) 1958. Ft. Wayne, Ind. Moolten, Frederick London, A.B. 1953. Highland Park, N. J. Moore, William Roland, s.B. (Univ. of Cal. at Los Angeles) 1958. Denver, Colo. Melrose Neelon, Francis Albert, s.B. (Boston Coll.) 1958. Ouellette, Eileen Marie, A.B. (Smith Coll.) 1958. Holyoke Oxman, Michael Neil, A.B. 1958. New Rochelle, N. Y. Paine, Anita, A.B. (Smith Coll.) 1958. Litchfield, Conn. Parker, Richard Malcolm, A.B. (Cornell Univ.) 1958. New York, N. Y. Plimpton, Sarah Gay, A.B. (Smith Coll.) 1958. New York, N. Y. Plotz, Paul Hunter, A.B. 1958. Brooklyn, N. Y. Podos, Steven Maurice, A.B. (Princeton Univ.) 1958. Brooklyn, N. Y. New York, N.Y. Pollatsek, Michael Eliot, A.B. 1958. Pruett, Kenneth Albert, A.B. 1958. Charlotte, N. C. Pyles, Robert Lindsay, A.B. (Univ. of Virginia) 1958. Shadwell, Va. Ravella, David Lawrence, Jr., s.B. (Univ. of Pittsburgh) 1958. Pittsburgh, Pa. Reider, Arthur Elliott, A.B. 1958. San Francisco, Cal. Reiss, David, A.B. 1958. New York, N. Y. Reiss, James Henry, A.B. 1958. New York, N. Y. Rosenthal, Saul Haskell, A.B. 1958. Brooklyn, N. Y. Savitz, David, A.B. 1958. New York, N. Y. Schweid, Daniel Edson, A.B. (Princeton Univ.) 1958. Shaker Heights, Ohio Silberstein, Edward Bernard, s.B. (Yale Univ.) 1958. Cincinnati, Ohio Silbert, David Frederick, A.B. 1958. Chestnut Hill Sillman, Frederick Holden, A.B. (Princeton Univ.) 1958. Bayville, N.Y.

Weston

Smith, Charles Bryan, A.B. (Amberst Coll.) 1958.

Sobel, Burton Elias, A.B. (Cornell Univ.) 1958. Larchmont, N.Y. Sorrentino, Eleanor Ann Attianese, A.B. (Bryn Mawr Coll.) 1958. Brooklyn, N. Y. Sparling, Philip Frederick, A.B. (Princeton Univ.) 1958. Barrington, Ill. Starr, Sandra Sue, s.B. (Mount Union Coll.) 1958. Chagrin Falls, Ohio Stocker, William Althen, A.B. (Carleton Coll.) 1958. Springfield, Ill. Strobel, George Elwood, Jr., A.B. 1958. Wheeling, West Va. Swift, David Bearce, s.B. (Norwich Univ.) 1958. Lincoln Thoft, Richard Allan Porter, s.B. (Massachusetts Inst. of Technology) 1958. Stevensville, Mont. ‡Tomlinson, Jerry Allan (Harvard Coll.) Marion, Ind. Vaillant, Henry Winchester, A.B. 1958. Bloomfield Hills, Mich. Waldron, Robert Leroy, 2d, A.B. (Princeton Univ.) 1958. Rockford, Ill. Walker, Michael Johnson, s.B. IN B.A. (Boston Univ.) 1952, A.B. (New York Univ.) 1958. Jackson Heights, N. Y. Waxman, Herbert Sumner, s.B. (Massachusetts Inst. of Technology) 1958. Mattapan Zimon, Richard Philip, A.B. 1958. Chestnut Hill Zinner, John, A.B. (Amherst Coll.) 1958. Great Neck, N.Y. Zivin, Lawrence Sheldon, A.B. 1956, A.M. 1958.

Denver, Colo.

# SUMMARY 1958-1959

Fourth Year	•				148
Third Year .			•		144
Second Year			•		110
First Year .			•		114
Total .					516

# **COLLEGES REPRESENTED**

Alabama IIminomima of		Cook Dies Heissenies of	
Alabama, University of	2	Costa Rica, University of	I
Albion College	I	Dartmouth College	43
Albright College	I	Davidson College	3
Allegheny College	I.	Denison University	3
Amherst College	19	DePauw University	I
Arizona, University of	I	Earlham College	I
Augustana College	I	Emory University	I
Baldwin-Wallace College	I	Florida, University of	2
Bard College	2	Franklin and Marshall College .	I
Bethany College	I	Freiherr-vom-Stein Schule	
Boston College	5	(Germany)	I
Boston University	2	Gettysburg College	I
Bowdoin College	I	Hamilton College	I
Brown University	2	Harvard University	147
Bryn Mawr College	3	Haverford College	
California Institute of Tech-	3	Hiram College	3
	•		7
nology	2	Hobart College	1
California, University of	2	Holy Cross, College of the	5
California, University of (at		Iowa State College	3
Los Angeles)	4	Iowa, State University of	2
Carleton College	3	Johns Hopkins University	6
Chicago, University of	4	Juniata College	I
Colorado, University of	I	Kentucky, University of	I
Columbia University	14	Kenyon College	I
Connecticut, University of	I	Lafayette College	I,
Concordia College	2	Massachusetts Institute of Tech-	
Cornell College	I	nology	7
Cornell University	13	Massachusetts, University of	í
•			

Miami, University of	ı	State Teachers College (Pa.)	I
Michigan, University of	I	Swarthmore College	6
Millsaps College	2	Tennessee, University of	I
Mississippi, University of	2	Texas, University of	I
Montana State University	I	Thiel College	1
Mount Union College	I	Transylvania College	I
Neuchatel, University of		Tripolis College (Greece)	I
(Switzerland)	I	Tufts University	6
New Hampshire, University of	I	Tulane University	I
New York University	2	Union College	2
North Carolina, University of	I	United States Naval Academy	I
North Dakota, University of	2	Valparaiso University	I
Northwestern University	I	Vanderbilt University	3
Norwich University	1	Vassar College	3
Notre Dame, University of	I	Virginia, University of	2
Oberlin College	I	Wabash College	I
Ohio State University	2	Washington University	I
Oklahoma, University of	2	Washington, University of	I
Oregon, University of	I	Wellesley College	I
Oxford, University of (Eng-		Wesleyan University	6
land)	2	West Virginia University	I
Pennsylvania, University of	3	Western Reserve University	I
Pennsylvania State University .	I	Williams College	10
Pittsburgh, University of	I	Wisconsin, University of	6
Pomona College	3	Wofford College	I
Princeton University	34	Wooster, College of	I
Radcliffe College	4	Yale University	35
Redlands, University of	I	Yeshiva College	I
Reed College	2	_	
Rice Institute	3	Total	527
Rochester, University of	I	Counted more than once	ΙI
Rutgers University	2	-	
Scripps College	I	Total number of students	516
Smith College	4		
South Dakota, University of	I	Entered advanced standing	67
Southern Methodist University	I	Number of colleges represented	116
Southwestern at Memphis	I	Number of college graduates	503
Stanford University	11	Number of non-graduates	13

# MEDICAL SCHOOLS REPRESENTED BY STUDENTS WHO ENTERED SCHOOL WITH ADVANCED STANDING

Alabama, University of	2	land)	I
Athens University	I	Tennessee, University of	2
Baylor University	I	Utah, University of	I
California, University of	3	Vanderbilt University	3
Dartmouth	39	Vienna, University of	I
Geneva, University of (Switzer-		Virginia, University of	I
land)	I	Washington, University of	I
Georgetown University	I	Wisconsin, University of	I
Iowa, State University of	I		
Jefferson	I	Total	68
John-Wolfgang-Goethe Uni-		Counted more than once	T
versitat (Germany)	I	Gounted more than once	•
Mississippi, University of	I	Total number of students ad-	
North Dakota, University of	4	mitted to first year standing	449
Northwestern University	I		
Oxford, University of (Eng-		Total	516

#### STAFF

ERNEST E. ADAMS, D.M.D., Instructor in Operative Dentistry.

JOHN T. ALBRIGHT, D.D.S., Research Associate in Oral Pathology.

MELVIN A. ANDELL, D.D.S., Instructor in Orthodontics.

Douglas A. Atwood, M.D., D.M.D., Research Associate in Prosthetic Dentistry.

HARRY K. BAILEY, D.M.D., Instructor in Operative Dentistry.

JOHN V. BLASI, D.M.D., Assistant Clinical Professor of Operative Dentistry.

NEVILLE A. BOOTH, D.M.D., Instructor in Oral Surgery.

CHARLES L. BOYERS, JR., D.M.D., Instructor in Pediatric Dentistry.

FINN BRUDEVOLD, D.D.S., Professor of Dentistry at the Forsyth Dental Infirmary for Children.

George Christman, d.m.d., Instructor in Oral Surgery.

MELVIN I. COHEN, D.M.D., Assistant Clinical Professor of Orthodontics.

C. RICHMOND CUSHING, D.M.D., Research Fellow in Orthodontics.

JACK G. DALE, D.D.S., Research Fellow in Orthodontics.

HERMAN DEWILDE, M.D., D.M.D., Clinical Associate in Oral Surgery.

JAMES M. DUNNING, D.D.S., M.P.H., Lecturer on Public Health Dentistry.

HAROLD L. EHRLICH, D.M.D., Clinical Associate in Prosthetic Dentistry. HENRY D. EPSTEIN, D.M.D., Clinical Associate in Dental Medicine.

James W. Etherington, d.M.d., Assistant Clinical Professor of Operative Dentistry.

ELIZABETH A. FANNING, B.D.S., Instructor in Dental Medicine.

DAVID J. FARRELL, D.M.D., Assistant Clinical Professor of Prosthetic Dentistry.

NORTON FISHMAN, D.M.D., Assistant in Prosthetic Dentistry.

ROBERT M. FRANK, M.D., L.D.S., Research Associate in Oral Pathology.

RONALD J. GIBBONS, PH.D., Research Fellow in Bacteriology.

HAROLD S. GOLD, D.M.D., Instructor in Prosthetic Dentistry.

PAUL GOLDHABER, D.D.S., Associate in Oral Pathology.

DAVID A. GRAINGER, D.D.S., Assistant in Dental Medicine.

Roy O. Greep, Ph.D., Professor of Anatomy in the School of Dental Medicine and Dean.

Poul Grøn, D.M.D., Research Fellow in Dental Medicine.

RICHARD C. GROSSMAN, D.M.D., Research Fellow in Orthodontics.

Walter C. Guralnick, D.M.D., Assistant Clinical Professor of Oral Surgery. Philip F. Hirsch, Ph.D., Associate in Pharmacology in the School of Dental Medicine (on leave from September 1, 1958).

PHILIP J. HOLLOWAY, PH.D., Research Fellow in Dental Medicine.

James T. Irving, ph.D., M.D., Professor of Anatomy in the School of Dental Medicine.

JOSEPH P. JAZOWSKI, D.M.D., Associate Clinical Professor of Prosthetic Dentistry.

LEIF B. JOHANNESSEN, D.M.D., Research Fellow in Pediatric Dentistry.

Alexander C. Kerr, ph.d., Associate in Physiology at the Forsyth Dental Infirmary for Children.

OWEN W. KITE, D.M.D., Assistant in Dental Medicine.

C. Kenneth Lasher, d.m.d., Instructor in Operative Dentistry.

LEON B. LEACH, D.M.D., Assistant in Dental Medicine.

LAURE LEBRET, D.F.M.P., Research Associate in Orthodontics.

ROBERT C. LINCOLN, D.M.D., Assistant in Oral Surgery.

PAUL K. Losch, D.D.s., Associate Professor of Pediatric Dentistry at the Children's Hospital and Chief of the Dental Service at the Children's Medical Center.

JOHN B. MACDONALD, D.D.S., PH.D., Professor of Oral Microbiology; and Director, Forsyth Dental Infirmary for Children and Tutor in Preclinical Sciences.

ARTHUR M. MALONEY, D.M.D., Associate Professor of Prosthetic Dentistry.

ROBERT J. MATUSOW, D.M.D., Instructor in Operative Dentistry.

RICHARD L. MINER, D.D.S., Instructor in Oral Surgery.

PAUL L. MUNSON, PH.D., Associate Professor of Pharmacology in the School of Dental Medicine.

JOHN NALBANDIAN, D.M.D., Research Fellow in Dental Medicine.

J. Howard Oaks, d.m.d., Instructor in Operative Dentistry.

GERALD L. O'NEILL, D.M.D., Clinical Associate in Operative Dentistry.

JULIAN M. ROTHBLATT, D.M.D., Instructor in Orthodontics.

EMILE C. A. SAMAHA, D.M.D., Instructor in Prosthetic Dentistry.

JAMES H. SHAW, Ph.D., Associate Professor of Biological Chemistry in the School of Dental Medicine.

EDWARD I. SILVER, D.M.D., Lecturer on Orthodontics.

WILLIAM E. SILVER, D.D.S., Instructor in Orthodontics.

SIGMUND SOCRANSKY, D.D.S., Research Fellow in Dental Medicine.

REIDAR F. SOGNNAES, Ph.D., D.M.D., Charles A. Brackett Professor of Oral Pathology and Associate Dean.

J. HENRY STEMPIEN, D.M.D., Research Fellow in Oral Surgery.

WARD R. STOOPS, D.M.D., Assistant in Pediatric Dentistry and Tutor in Medical Science.

GLENN A. SUTTON, D.D.S., Instructor in Operative Dentistry.

LENNARD T. SWANSON, D.M.D., Clinical Associate in Orthodontics.

G. EARL THOMPSON, D.M.D., Associate Clinical Professor of Operative Dentistry.

NORMAN TRIEGER, D.M.D., Instructor in Dental Medicine and Tutor in Medical Science.

Myron J. Van Leeuwen, d.d.s., Assistant Clinical Professor of Operative Dentistry and Director of the Clinic.

DAVID WEISBERGER, D.M.D., M.D., Professor of Dental Medicine and Chief of the Dental Department at the Massachusetts General Hospital.

WILLIAM D. WELLOCK, D.M.D., M.P.H., Lecturer on Public Health Dentistry. HERBERT WELLS, D.M.D., Research Fellow in Orthodontics and Tutor in Medical Science.

PHILIP H. WHITE, D.M.D., Lecturer on Oral Surgery.

Austin T. Williams, D.M.D., Lecturer on Oral Surgery.

GEORGE H. WYSHAK, Ph.D., D.M.D., Assistant in Dental Medicine.

Peter Kai-jen Yen, d.m.d., Instructor in Dental Medicine.

S. JEROME ZACKIN, D.M.D., Research Fellow in Dental Medicine.

#### Announcement of Courses

During the first two academic years, dental and medical students pursue courses of study that are alike in philosophy and objectives but that differ in content. Special exercises have been devised for dental and medical students to illustrate for each group how the basic sciences serve their respective professions. Tutorial study of dental students is under the direction of the dental staff.

Second year dental students are required to attend a series of lecture-demonstrations in oral diagnosis:

Oral Diagnosis — 2nd year. Dr. Weisberger and Associates.

This course is devoted to examining the structures of the oral cavity and anatomically related areas. Students will be assigned to patients in the School of Dental Medicine for this course.

Oral Histology and Pathology — 3rd and 4th years. Professor Sognanes; Drs. Albright and Goldhaber.

The teaching in the third year begins with a microscopic laboratory course and a series of discussions devoted to the histology and pathology of the tissues of the oral cavity and is augmented in the third and fourth years by the clinical teaching staff through many activities in the clinic and in the hospitals.

Dental Anatomy — 1st semester 3rd year. Assistant Professor Van Leeuwen and Dr. Oaks.

Instruction in dental anatomy and tooth morphology. Special emphasis is placed on individual tooth form and the relationship of the tooth to adjacent teeth, opposing teeth and supporting tissue. Technique practice in reproduction of tooth form is stressed using natural extracted teeth.

Radiology — 3rd and 4th years. Dr. DEWILDE.

Principles of applied roentgenology and the interpretation of radiographs, with consideration of the electro-physical basis of roentgenology, are covered in the third year. Practice in radiological technique is given in both years.

Operative Dentistry — 3rd and 4th years. Associate Professor Thompson and Assistant Professor Van Leeuwen; Drs. Brudevold,

Blasi, Etherington, O'Neill, Adams, Bailey, Boyers, Lasher, Matusow, Oaks and Sutton.

Early student-patient contact and immediate clinical application of learned technical procedures are emphasized. In the third year instruction is given in oral hygiene, accepted methods of dental prophylaxis and technique of cavity preparation in conjunction with a study of the various types of restorative materials.

In the fourth year gold foil technique is given, and clinical practice

in all phases of operative procedure is continued.

Prosthetic Dentistry — 3rd and 4th years. Associate Professor Maloney; Drs. Jazowski, Farrell, Ehrlich, Gold, Samaha and Fishman.

Prosthetic dentistry which includes complete, fixed and removable prosthesis is taught in the third and fourth years. Through lectures, conferences and demonstrations the student receives clinical and laboratory instruction in the anatomy and physiology of the mouth as it applies to prosthetic dentistry, and in the materials and techniques of prosthetic restoration directed toward oral health, function and aesthetics. Every effort is made to provide early clinic contacts and to teach technique on clinic cases. The high teacher-student ratio, small classes and special physical facilities favor this type of instruction.

Dental Medicine — 3rd and 4th years. Professor Weisberger; Drs. Booth, Christman, Trieger, Kite and Wyshak.

A course devoted to the diagnosis and treatment of oral diseases, i.e., diseases of the periodontium, dental pulp, oral mucosa and other oral structures together with their correlation to systemic conditions. Lectures, seminars, clinical practice and observation both in the Dental Infirmary and at the Massachusetts General Hospital.

Infirmary procedures, identification of oral structures, methods of oral examination, history taking, and common methods of diagnosis for dental and oral disease are given in both years, supplemented by practice in the general clinic.

Periodontics — 3rd and 4th years. Professor Weisberger; Drs. Gold-HABER and Epstein.

Emphasis is placed on the recognition and correction of systemic

factors contributing to diseases of the supporting structures of the teeth.

Various methods in local treatment are taught and applied in the clinic. The care of the entire patient is stressed.

Pharmacology in Clinical Dentistry — 2nd semester 4th year. Associate Professor Munson; Drs. Weisberger and Trieger.

Practical recommendations and theoretical bases for the use of drugs by the dental practitioner. The more important classes of drugs used in medicine will also be considered, particularly where their use necessitates modification of the usual dental treatment.

Oral Surgery — 3rd and 4th years. Professor Weisberger; Drs. Guralnick, DeWilde, Booth, Christman, Miner and Lincoln.

The students are taught through lectures and seminars the principles of surgery as applied to exodontia, minor oral surgery, maxillofacial surgery and fractures and anaesthesia.

Individual clinical instruction in exodontia, minor oral surgery and anaesthesia is given at the Dental Infirmary.

In the fourth year students are assigned to the Massachusetts General Hospital as clinical clerks on the Dental Service. At the hospital more extensive surgery of the oral cavity including traumatic injuries to the face and jaws is observed. The student takes active part in the study and treatment of such cases.

Pediatric Dentistry — 3rd and 4th years. Associate Professor Losch; Drs. Boyers and Stoops.

Lectures and demonstrations introduce the subject in the third year with emphasis on the physical and psychological development of the child. In the general clinic, the student, under supervision, practices routine dental care for children and learns principles of patient and parent instruction in oral hygiene and personal caries control measures.

In the fourth year, the student continues practice in pediatric dentistry in the general clinic. In addition, he visits the Children's Medical Center where, under the guidance of the dental staff, he views those conditions of both in- and out-patients best seen in a hospital atmosphere. Special consideration is given to those patients whose systemic disease includes oral manifestations. Individually, he observes the staff at dental operations performed in the main operating rooms of the hospital. Ward rounds by the dental staff are given

regularly. Students attend the clinico-pathological conferences and are assigned to other teaching exercises given by the general staff of the hospital.

Orthodontics — 3rd and 4th years. Assistant Professor Cohen; Drs. Swanson and Rothblatt.

Clinical instruction consists in the observation of developing dentures, the use of preventive measures and the use of selected orthodontic treatment procedures by each student. Emphasis is placed on the development of sound clinical judgment as a basis for the selection and care of orthodontic patients within the scope of general practice. Opportunity is provided for experience beyond the required minimum for those students with special interest and ability. Discussions and demonstrations supplement the work of the clinic. Each student is required to present a paper in seminar during his junior year and in the last semester of the senior year each student is responsible for the presentation of one or more cases he has treated during his clinical years. In addition to lectures on growth and development, mechanotherapy, and tissue response to tooth movement, lectures and demonstrations are given in cephalometrics, cleft palate, and surgical orthodontics. Observation of a great variety of orthodontic treatments is provided at the Children's Medical Center.

Endodontics - 3rd and 4th years. Drs. O'Neill and Matusow.

In the third year the clinical and pathological presentation of pulpalperiapical disease is integrated with the teaching of oral pathology. In this manner the student achieves an early appreciation of the pathological course of events and the clinical symptoms which necessitate endodontic therapy. Clinical demonstrations and laboratory technique exercises are given on bacteriological culturing, biomechanical debridement and canal obturation techniques preceding the assignment of patients for clinical experience.

In the fourth year diagnostic conferences and clinical experience involving conservative root canal therapy and the indications and application of periapical surgery round out the student's introduction to the field.

Introduction to Dental Research — 1st semester 3rd year. Associate Professor Munson and Associates.

A series of ten or more one-hour lectures on specific research projects available for student participation in the research laboratories of the School of Dental Medicine.

Research Project — 3rd and 4th years. Associate Professor Munson and Associates.

In order to gain a more realistic appreciation of the nature of scientific research, all students of the Harvard School of Dental Medicine, as a requirement for graduation, participate in a laboratory or clinical investigation of their own choosing. By the end of the first semester of the third year, after completion of the course, Introduction to Dental Research, the student has chosen a research supervisor from the faculty and the subject to be investigated. He presents a plan for his research project in the form of a seminar at the beginning of the second semester. During the rest of the third year, and in some cases during the summer months, he attempts to master the techniques necessary for his work. During the fourth year, with the advice and aid of the faculty research supervisor, the project is carried forward, and at the end of the year, the student presents a seminar summarizing his results. Both the third- and fourth-year seminars are also required in written form for permanent reference in the Library.

Nutrition — 1st and 2nd semesters 3rd year. Associate Professor Shaw.

Discussion of relations of nutrition to the development, maturation and maintenance of the oral tissues. Discussion of nutritional requirements, relative values of various foods and the preparation of diet histories. Clinic practice in the evaluation of diet histories and in the development of suitable recommendations for the patient.

Public Health Dentistry — 3rd year. Dr. Dunning; Dr. Wellock and Associates from the Medical School and School of Public Health. Public health principles and practices with emphasis on the participation of the dentist. Elements of biostatistics and epidemiology. Lectures, seminars and field work.

Practice Management and Dental Jurisprudence — 2nd semester 4th year. Dr. Dunning; Dr. Ford from the Medical School.

Lectures and seminars on practice management, ethics and jurisprudence.

History of Dentistry — 3rd year. Dr. Oaks; Drs. Greep and Sog-NNAES.

A course designed to provide a brief background in the ancient and recent developments in dentistry. Several lectures will be devoted to the Harvard Dental School, the School of Dental Medicine, and its affiliated organizations.

The tabulated hours below indicate the approximate allotment of time for the third and fourth academic years in the School of Dental Medicine.

As the entering classes are limited, it is possible to reduce the time usually involved in courses of dental techniques. Individual instruction, demonstrations, seminars and conferences replace the traditional lecture system to a large degree.

THIRD YEAR			FOURTH YEAR	
	ectures,		Lectures,	
	Lab. or Demon-		Lab. or Demon-	
s	tration	Clinic	stration	Clinic
Oral histology and			Radiology 8 ·	20
pathology	32		Operative dentistry 36	118
Dental anatomy	45		Prosthetic dentistry	
Radiology	12	10	Complete denture	
Operative dentistry	104	160	prosthesis 10	103
Oral hygiene and			Removable denture	
prophylaxis	18	20	prosthesis 10	90
Prosthetic dentistry			Fixed partial pros-	
Complete denture			thesis 97	196
prosthesis	90	144	Dental medicine 13	_
Removable partial			Clinical clerkship,	
prosthesis	42	72	Massachusetts	
Dental medicine	16	<u> </u>	General Hospital —	60
Dental medicine,			Oral diagnosis 13	60
Massachusetts			Periodontics 8	72
General Hospital	<u>-</u>	4	Dental materia	
Oral diagnosis	16	52	medica 16	_
Periodontics	26	52	Oral surgery and	
Oral surgery	_	3	anaesthesia 32	40
Oral surgery,			Pediatric dentistry at	-0.1
anaesthesia	8	_	the Children's Hos-	
Pediatric dentistry	12	20	pital —	35
Orthodontics	68	120	Orthodontics 24	126
Endodontics	10	20	Endodontics 10	30
Introduction to dental			Student research and	
research	10	V	seminar 24	_
Student research and			Practice management	
seminar	24		and dental juris-	
Nutrition	8		prudence 6	
Public health dentistry	7 24	9	11 1	
History of dentistry	6		307	950
			, ,	
	571	686		
	21-			

On June 12, 1958, Twelve Degrees were Conferred as Follows:

## D.M.D.

Joseph Fledel Beck, M.A. (Univ. of Breslau) 1946 [Univ. of Nebraska Coll. of Medicine ]. Newton Carl Greenfield Cohen, A.B. (Univ. of California at Los Angeles) Far Rockaway, N. Y. Bernard Donald Gold, A.B. (New York Univ.) 1952. Brooklyn, N. Y. Morton Harold Goldberg, s.B. (Univ. of Massachusetts) 1954. Springfield Stanley Richard Saxe, A.B. (Boston Univ.) 1953. Malden Sheldon Schumer, A.B. (Brooklyn Coll.) 1951. Brooklyn, N. Y. James Henry Stempien, A.B. (Yale Univ.) 1955. New Britain, Conn. Barry David Trabitz, s.B. (Purdue Univ.) 1954. Brooklyn, N. Y.

#### D.M.D. cum Laude

John Nalbandian, A.B. (Brown Univ.) 1954. Cranston, R. I. Joseph Carter Oakley, A.B. 1954. Bardstown, Ky. William Horne Tingey, Jr., s.B. (Univ. of Utah) 1952. Salt Lake City, Utah

## D.M.D. cum Laude for Thesis in a Special Field

Leon Benjamin Leach, A.B. (Brown Univ.) 1952, S.M. (Univ. of Rhode Island) 1954. Providence, R. I.

#### Fourth Class

Ash, Homer Lee, B.S. (Univ. of Illinois) 1951. Huntington, W. Va. Bauer, Peter William, B.A. (Yale Univ.) 1955. New Britain, Conn. Dewan, Otis Kyron, Jr., A.B. 1955. Whitesboro, N. Y. Douglas, Joel Paul, B.S. (Univ. of Massachusetts) 1955. Haverbill Farbman, Albert Irving, A.B. 1955. Revere Genua, Vincent Loreto, A.B. (Brown Univ.) 1955. Waterbury, Conn. Giddon, Donald Bernard, A.B. (Brown Univ.) 1952, M.A. (Boston Univ.) 1953. Chestnut Hill Hain, James Neil, A.B. 1955. Dorchester \$Hoover, Terrence David (Franklin and Marshall Coll.). York, Pa.

Kaplan, Samuel, B.M.E. (City Coll. of New York) 1950. Bronx, N. Y. Keller, Andrew Zellus, B.S. (Morehouse Coll.) 1949.

Chattanooga, Tenn.

Prescott, Marvin Arthur, A.B. 1955.

Seifert, Donald Max, A.B. (Brown Univ.) 1955.

Storn Burt Donald R.A. (New York Univ.) 1955.

Fleebing N. Y.

Stern, Burt Donald, B.A. (New York Univ.) 1955. Flushing, N. Y.

#### Third Class

Bortnick, Louis Saunder, A.B. (Williams Coll.) 1956. Jamaica Plain Fasciano, Robert Walter, B.S. (Tufts Univ.) 1956. Somerville ‡Fischman, Stuart Lee (Cornell Univ.). Buffalo, N. Y. Giordano, Russell Anthony, B.A. (Univ. of Connecticut) 1956.

New London, Conn.

Kimball, Peter Gray, A.B. (Hamilton Coll.) 1956. Marblehead Maldonado, Alfred Anthony, B.S. (Brooklyn Coll.) 1954.

Brooklyn, N.Y.

‡Morin, Edward Marshall (Clark Univ.)WorcesterPrifty, Robert James, A.B. (Brown Univ.)1956.Waterbury, Conn.Rosenthal, Edward, A.B. 1956.DorchesterSheffer, Joseph, A.B. (Brown Univ.)1956.Chestnut HillShulman, Leonard Burton, A.B. 1955.Brighton‡Sudikoff, Norman (Dartmouth Coll.)Chelsea

#### Second Class

Barsh, Laurence Irwin, A.B. (Boston Univ.) 1957. Brookline
Booth, Donald Frederick (Middlebury Coll.). Beverly
Flanagan, Jack Buford, Jr., B.C.E. (Georgia Institute of Technology)
1952, S.M. (Massachusetts Institute of Technology) 1953.

Cambridge

Gianelly, Anthony Alfred, A.B. 1957.

Goodman, Frederic, A.B. 1957.

Roslyn Heights, N. Y.

Gove, Donald Frederick, s.B. (Univ. of New Hampshire) 1957. Concord, N. H.

Handelman, Chester Sidney, A.B. (Washington and Jefferson Coll.) 1957. Brooklyn, N. Y.

Loesche, Walter Joseph, A.B. (Yale Univ.) 1957. New Haven, Conn. Mann, Charles Melvin, A.B. (Boston Univ.) 1953. Brighton

McNulty, Edward Conroy, s.B. (Coll. of the Holy Cross) 1	957.
White F	Plains, N. Y.
Mori, Donald Francis, A.B. (Univ. of Vermont) 1957.	Barre, Vt.
Sholler, Robert Martin, A.B. 1957.	Quincy
Sowles, James Homer, A.B. (Williams Coll.) 1957.	Dedham
\$Sweeney, Edward Arthur (Boston Univ.). Ja	amaica Plain
First Class	
Agranat, Barry Joseph, A.B. (Brandeis Univ.) 1958.	Brighton
Berman, Kenneth Sidney, A.B. 1958.	Brookline
Carbone, Duane Francis, A.B. 1958.	Beverly
Courant, Paul Richard, s.B. (Tufts Univ.) 1958.	Gloucester
Donahue, Robert Mark, s.B. (Tufts Univ.) 1957.	Arlington
‡Flood, Peter John (Tufts Coll.).	Norwood
Harring, Cedric Frasier, Jr., A.B. (Colby Coll.) 1957.	
	wton Centre
Kahn, Melvin, A.B. 1958.	Dorchester
Kaplan, Theodore, s.B. (Boston Coll.) 1958.	Brookline
Leake, Donald Lewis, A.B. (Univ. of Southern California	) 1953.
Tucs	on, Arizona
McCarthy, Stanley Lawrence, s.B. (Boston Coll.) 1958.	Weston
Miller, Stephen Avrom, A.B. 1958.	Dorchester
Morton, George Henry, III, s.B. (Tufts Univ.) 1958.	Hyde Park
Norton, Louis Arthur, A.B. (Bowdoin Coll.) 1958. Manch	ester, N. H
Sherman, Donald Stephen, A.B. (Brandeis Univ.) 1958.	Saugus
Susi, Frank Robert, s.B. (Boston Coll.) 1958.	East Boston

# SUMMARY 1958-59

Fourth Class					14
Third Class					I 2
Second Class					14
First Class.					16
Total					56

## **COLLEGES REPRESENTED**

Boston College 3	Morehouse College
Boston University 4	Middlebury College
Bowdoin College	New Hampshire, University of . 1
Brandeis University 2	New York University
Brooklyn College 1	Southern California, University
Brown University 5	of
City College of New York	Tufts University 5
Clark University	Vermont, University of
Colby College	Washington and Jefferson Col-
Connecticut, University of	lege
Cornell University	Williams College 2
Dartmouth College 1	Yale University 2
Franklin and Marshall College 1	•
Georgia Institute of Technology 1	Total 58
Hamilton College	Counted more than once 2
Harvard University 13	Total number of students 56
Holy Cross, College of the 1	Total number of students
Illinois, University of 1	<del></del>
Massachusetts Institute of Tech-	Number of colleges represented 30
nology	Number of college graduates . 51
Massachusetts, University of 1	Number of non-graduates 5
•	

### PROFESSORS EMERITI

JOSEPH C. AUB, M.D. JAMES B. AYER, M.D.

J. Lewis Bremer, M.D. 1941-1959 Hersey Professor of Anatomy STANLEY COBB, M.D. 1951 -

CYRUS H. FISKE, M.D. ALEXANDER FORBES, M.D. CHESTER N. FRAZIER

James L. Gamble, M.D. WORTH HALE, M.D.

Parker Heath, M.D. 1954 -

George W. Holmes, M.D. 1941

A. LeRoy Johnson, d.m.d.\ CHESTER M. JONES, M.D. 1957 - Clinical Professor of Medicine ELLIOTT P. Joslin, M.D. 1937 -VARAZTAD H. KAZANJIAN, D.M.D. WILLIAM E. LADD, M.D.

THOMAS H. LANMAN, M.D. G. Clinical Professor of Surgery WILLIAM G. LENNOX, M.D. J. Howard Means, M.D.

CHARLES G. MIXTER, M.D. 1944 - Clinical Professor of Surgery

Frank R. Ober, M.D.

Professor of Research Medicine James Jackson Putnam Professor of Neurology

Bullard Professor of Neuropa-

thology

Bronson Crothers, M.D. 1957 - Clinical Professor of Pediatrics Professor of Biological Chemistry Professor of Physiology Edward Wigglesworth Professor of Dermatology Professor of Pediatrics THOMAS R. GOETHALS, M.D. 1567, Clinical Professor of Obstetrics Associate Professor of Pharmacol-

Clinical Professor of Ophthalmol-

ogy

WILLIAM A. HINTON, M.D. MS & Clinical Professor of Bacteriology and Immunology

> Clinical Professor of Roentgenology

> Professor of Clinical Dentistry Clinical Professor of Medicine Professor of Plastic Surgery William E. Ladd Professor of Child Surgery

Associate Professor of Neurology SAMUEL A. LEVINE, M.D. Clinical Professor of Medicine Jackson Professor of Clinical Medicine

LEROY M. S. MINER, D.M.D., M.D. Professor of Clinical Oral Surgery

John B. and Buckminster Brown Clinical Professor of Orthopedic Surgery

#### PROFESSORS EMERITI

1956-Clinical Professor of Gynecology JOHN ROCK, M.D. FREDERICK F. RUSSELL, M.D. Professor of Prevent Medicine and Epidemiology GEORGE C. SHATTUCK, M.D. Clinical Professor of Tropical Medicine Thomas Morgan Rotch Professor RICHARD M. SMITH, M.D. of Pediatrics Professor of Psychiatry HARRY C. SOLOMON, M.D. Professor of Radiology at the MERRILL C. SOSMAN, M.D. Peter Bent Brigham Hospital Clinical Professor of Pediatrics FRITZ BRADLEY TALBOT, M.D. 1932 Professor of Oral Surgery and KURT H. THOMA, D.M.D. Charles A. Brackett Professor of Oral Pathology George Fabyan Professor of Com-ERNEST E. TYZZER, M.D. parative Pathology and Professor of Tropical Medicine Professor of Ophthalmic Research Frederick H. Verhoeff, M.D. Walter Augustus Lecompte Pro-DAVID H. WALKER, M.D. fessor of Otology IRVING J. WALKER, M.D. 1941 -Clinical Professor of Surgery Edward Wigglesworth Professor of CHARLES J. WHITE, M.D. Dermatology



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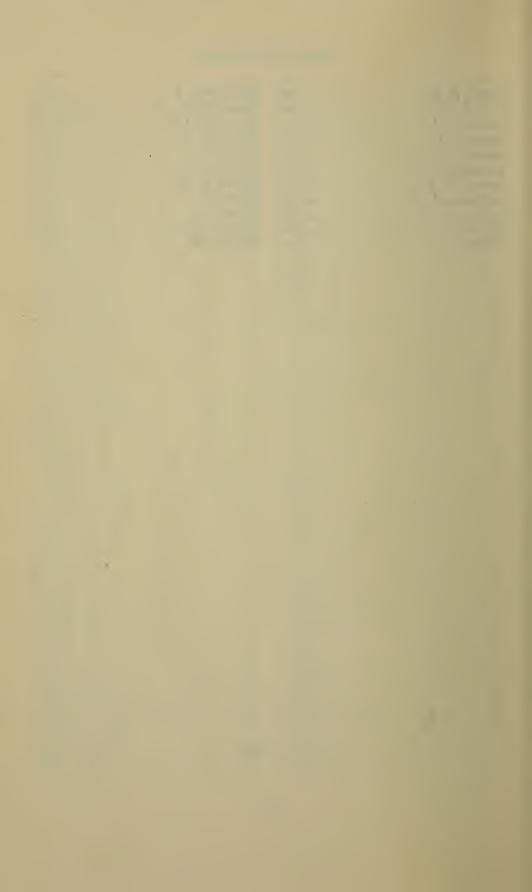
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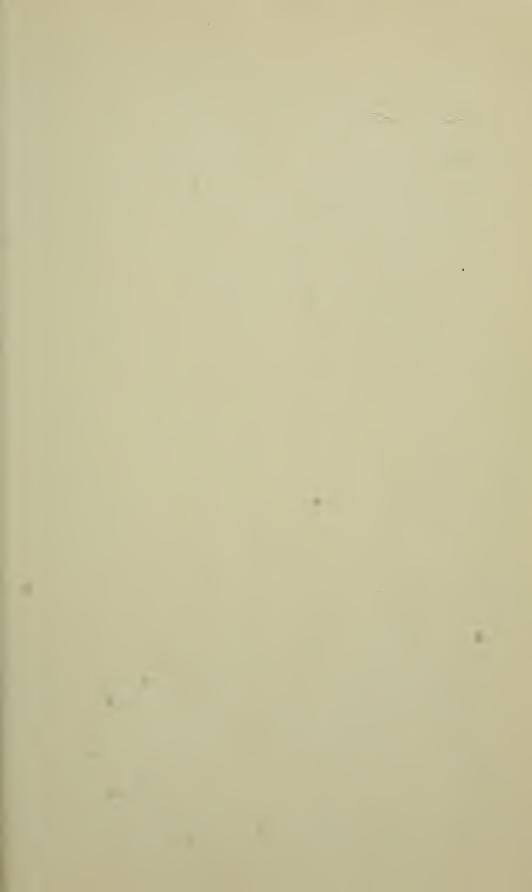
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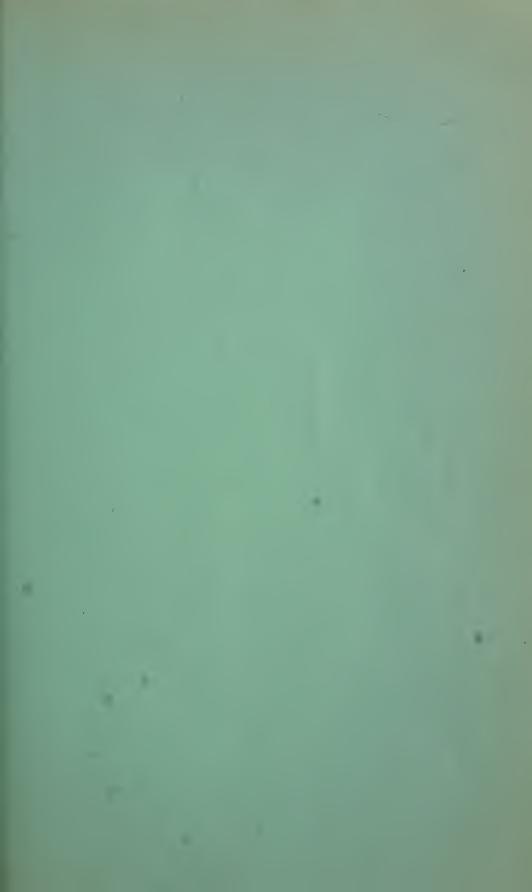
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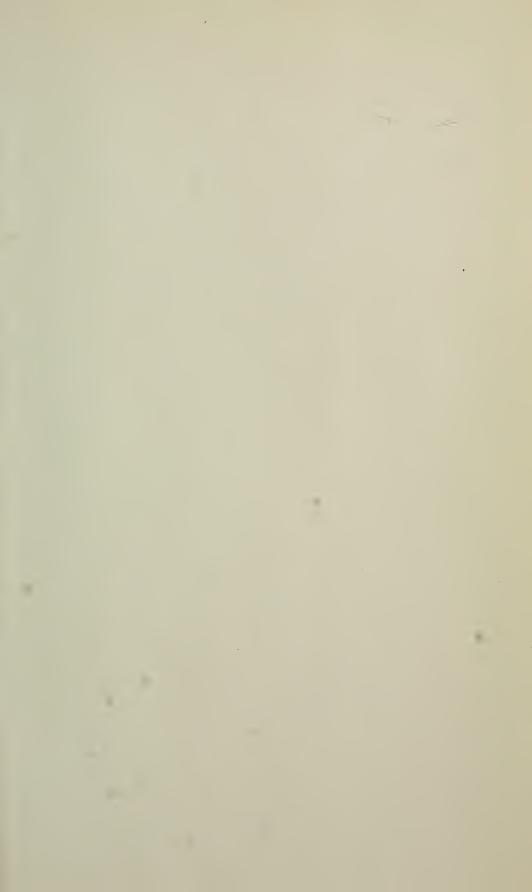












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